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NYSE: ASX



**ASE Technology Holding Co., Ltd.  
Annual Report 2018 ( I )**

Date: February 28, 2019

This annual report can be found on the following websites

1. Market Observation Post System:

<http://mops.twse.com.tw/mops/web/index>

2. Company Website: <http://www.aseglobal.com>

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Overseas Securities Exchange: New York Stock Exchange (NYSE)  
For more information on the overseas securities, visit: <http://www.aseglobal.com>

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# I. Letters to Shareholders

Dear Shareholders,

2018 saw the world move into a new and somewhat unsettling geopolitical phase that created risk and uncertainty worldwide. We saw business growth in the first half of 2018, but decline in the second half due to concern over US-China trade relations. This mirrored the global economic development trend that started 2018 with a positive outlook, then declined, testing the flexibility and responsiveness of the management of corporations. The International Monetary Fund (IMF) revised the 2018 economic growth rate downward to 3.7%. According to Gartner<sup>1</sup>, the global semiconductor market revenue was US\$ 476.7 billion in 2018, representing an increase of 13.4% over 2017. Gartner estimates that global semiconductor revenue will reach US\$ 488.9 billion in 2019, representing a marginal growth rate of 2.6% compared to 2018.

According to the statistics of IEK ITIS Program of Industrial Technology Research Institute (ITRI), the total production value of the IC Packaging and Testing industry in 2018 amounted to NT\$ 493 billion, growing by 3.4% compared to 2017. The total production value of the IC Packaging market reached NT\$344.5 billion, up 3.5% from the previous year, and the IC Test market NT\$ 148.5 billion, growing 3.1% from 2017. The operational performance of the Company and its subsidiaries (referred hereinafter to as “the Group”) in the past year is as below:

## Operational Performance in 2018

### 1. Outcomes of the 2018 Operational Plan

The combined revenues of the Group in 2018 amounted to NT\$ 371.1 billion, an increase of approximately NT\$ 80.7 billion compared to the previous year, with an annual growth rate of 27.8%. The combined revenues of the business area of IC packaging were NT\$ 214.2 billion, going up by NT\$ 61.8 billion with a growth rate of 40.6% from 2017, mainly attributed to the contributions of Siliconware since it joined the Group on April 30, 2018. Further, in the business area of Electronic Contract Manufacturing (ECM), the combined revenues in 2018 grew by NT\$ 17.9 billion at NT\$ 151.9 billion from 2017 with an annual growth rate of 13.4%.

### 2. Budget Execution

The Company’s Financial Forecast in 2018 was not disclosed.

### 3. Analysis of Financial Expenditures and Profitability

In 2018, the Company’s paid-in capital was NT\$ 43.2 billion. As specified in the Company’s 2018 consolidated financial statement, the total equities owned by the Company’s proprietors totaled at NT\$ 203 billion, accounting for 38.1% of the total assets of NT\$ 533.4 billion. The long-term capital assets accounted for 175.7% of those of properties, assets, and equipment, with a 129% liquidity ratio and a 6.5% return on asset (ROA). The financial ratio was not far from that of the previous year. Moreover, although the combined operating profit ratio of 16.5% in 2018 was slightly lower than that of 18.2% in 2017, the net operating profits rose by 5.6%

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<sup>1</sup> Source: Gartner: Semiconductor Forecast Database, Worldwide, 4Q18 Update , Nolan Reilly, Ben Lee et al., 24 December 2018

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(NT\$ 1.4 billion) from 2017 to NT\$ 26.6 billion in 2018. Net income before taxes was NT\$ 32 billion, going up by NT\$ 1.1 billion at a 3.6% rate from the previous year. This is attributed to the net income of the Company's proprietors of NT\$ 25.3 billion. We have seen improved profitability in 2018 over 2017.

#### 4. Research and Development

With the pervasiveness of compute and mobile devices, technology related to single-chip integration has gradually matured, a trend in line with Moore's Law, which has traditionally driven the efficiency of global microelectronics and semiconductors. The electronics product landscape continues to grow and diversify, driven by increasing demands within Internet of Things (IoT), High Performance Computing (HPC), Artificial Intelligence (AI), automotive, 5G, and more. As such, the semiconductor industry supply chain strives to advance to a more valuable and higher level of system integration. This underscores the significance of heterogeneous integration, which can be defined as the integration of separately manufactured components into an SiP, providing enhanced functionality and improved performance while maintaining the pace of innovation needed for electronics systems today. The Group continues to progress key technology platforms, such as advanced system packaging and modulation, flip chip bumping/copper wire, and low and medium pin count packaging. Key products and technologies successfully developed in 2018 are as follows:

- (1) Flip Chip Packaging (FCP): technically attested process of 7- and 10-nano chips, the 14- and 16-nano copper-electroplating process/Low-K dielectric FCP application and silver-alloy wires for hybrid flip chip ball grid array packages.
- (2) Wire-bond packaging: the development of second generation advanced embedded component packaging, pressure sensor packaging, the technology of bonding copper/gold wires with ultra-fine spacing and wire internals, and Mobile DRAM.
- (3) Wafer Level Packaging: Silicon Photonic component technology, Through-Wafer Via, glass substrate panel packaging, hexahedral Wafer Level Chip Scale Packaging (WLCSP), Fan-Out PoP Chip product development, and the die-to-wafer fitting process.
- (4) Advanced packaging and modulation: low power consumption antenna design and packaging, bendable substrate panel and packaging, dual side thinning and wireless communication modulation, and 5G antenna packaging product development.

#### **Summary of the 2019 Business Plan**

##### 1. Operational Guideline of the Group

- (1) To provide clients with services with the "highest quality."
- (2) To generate long-term and stable profits for the Company and clients.
- (3) To collaborate with vendors and partners to jointly create prosperity.
- (4) To train employees to become experts and elites in respective fields.
- (5) To treat all employees "fairly" and "reasonably."
- (6) To provide employees with 'a harmonious, enjoyable and open' work environment.
- (7) To maintain operational flexibility whenever possible.

## 2. Estimated Sales Volume and Supporting Info

Based on the industry prospect, future market demands, and productivity of the Group, the estimated sales volume of the Group in 2019 is as follows:

| Sales Items | Estimated Sales Volume     |
|-------------|----------------------------|
| Assembly    | Approx. 28.8 billion units |
| Testing     | Approx. 5.2 billion units  |

## 3. Key Production and Sales Policies

We founded ASE Technology Holding Co., Ltd. on Apr. 30, 2018. This move signified a big leap forward, both for the development of the Group and the entire semiconductor industry. As the semiconductor industry gradually matures, business models continue to evolve so players can stay competitive. With giants working hand-in-hand, there will undoubtedly be greater talent and capital investment, creating better opportunity to serve clients, deliver technology, and increase market share. On the pro forma basis, the Group's revenues for semiconductor packaging and testing reached US\$ 8.2 billion in 2018. Meanwhile, the revenues of ECM operation amounted to a record high of US\$ 5 billion in 2018. System-in-Package (SiP) revenue grew by 14% to US\$ 2.2 billion over 2017. It is expected that growth SiP growth momentum will continue to growth in 2019 and beyond. In 2018, the capital expenditures on our machinery and equipment were mainly spent on the testing operation. The annual growth rate reached 4% reaching 8% by the second half of 2018. This growth momentum is expected to continue. Next year, we will continue to increase the capital expenditure in a steady fashion, with the main focuses on the integration of new technologies, Fan-Out Wafer Level Packaging (Fan-Out), and SiP. We will also expand the production base and implement factory automation infrastructure. Our production scale and innovation capacities are our fundamental impetus for continuous growth. And we believe SiP and Fan-Out operations will continue to grow. The Group will forge ahead to work on new development and applications of SiP and Fan-Out, and the integrated solutions of low voltage and embedded power supply.

## Future Development Strategies of the Group

The Group has experienced two waves of growth that can be attributed to Cu Wire and SiP respectively, and will embrace the next wave as related to heterogeneous integration. Semiconductor designs of the future will no longer comprise a single chip or die. Instead, designers will focus on creating holistic systems, essentially, heterogeneous integration through SiP. For ASE, it has become very important to create a cross-functional platform that integrates SiP electronic design automation with domain knowledge. In the future, we may reconsider adjusting four key areas, including business partners, cooperation models, innovation, and economic benefits. Regarding the adjustment of business partners, we will strive to have a voice in the value allocation of the global semiconductor industry, increasing cooperation within and across industries, governments, and academia, while connecting allocated business values. As for cooperation models, we will operate and cooperate with specific global competitors. Regarding innovation, as Moore's Law gradually slows down, the heterogeneous integration of IC packaging and testing in the future will determine the efficacy of the execution of Moore's Law. Lastly, with respect to economic benefits, processes equipped with AI and Industry 4.0 capabilities will be essential.

## Impacts of the external competitive, regulatory, and overall operational environments

Due to the impact of trade relation concerns between the US and China, international forecasting institutions have revised down their original optimistic figures. The global economy is being overshadowed by trade protectionism, and US-China trade relations have become intrinsically a political issue. An immense trade deficit lies between both countries and its impacts cover a wide range of areas, including the industrial and real estate industries. Fortunately, both parties have exercised refrain and it is expected that the trade war will not deteriorate to a greater extent. Even though the US and China have reached consensus recently, the trade war created temporary turmoil. The trade issues that lie between both countries still depend on global economic development. The Group has plans at the global level and will respond to market development and client demands to make flexible deployment and adjustment of production capacities in order to minimize the impacts. For the outlook in 2019, as uncertainties still exist domestically and internationally, we will not only keep a watchful eye on international economic trends, but also continuously strive for stability and growth.

Jason C.S. Chang, Chairman

## Executive Summary

Unit: NT\$ in millions

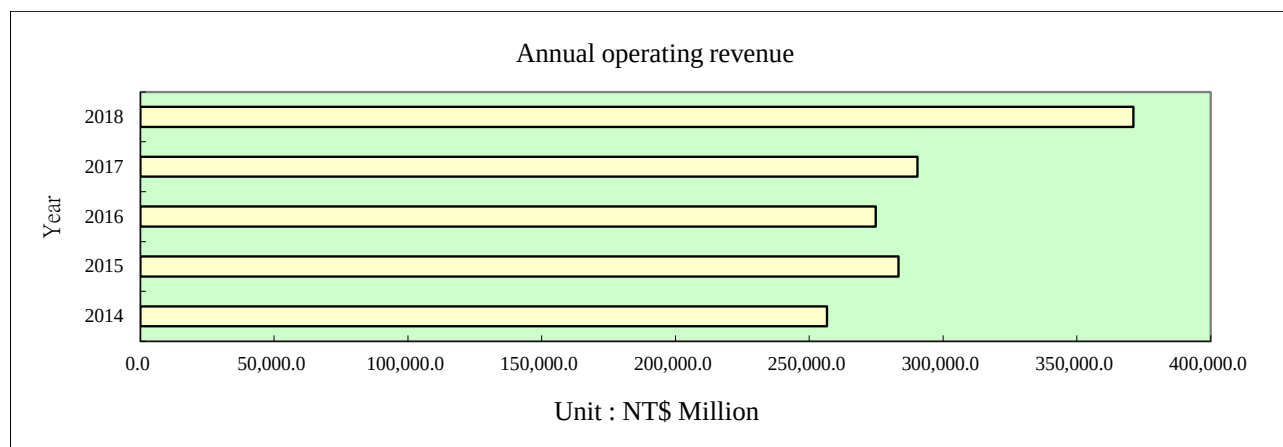
| Consolidated financial statements<br>(Notes 1)                          | 2014       | 2015       | 2016      | 2017         | 2018      |
|-------------------------------------------------------------------------|------------|------------|-----------|--------------|-----------|
| Operating revenue                                                       | 256,591.4  | 283,302.5  | 274,884.1 | 290,441.2    | 371,092.4 |
| Gross profit                                                            | 53,588.5   | 50,135.2   | 53,187.2  | 52,732.3     | 61,163.1  |
| Profit from operations                                                  | 29,645.9   | 24,884.6   | 26,660.4  | 25,218.6     | 26,647.7  |
| Profit before income tax                                                | 28,548.2   | 25,006.9   | 27,984.8  | 30,928.9     | 32,047.4  |
| Net income                                                              | 24,281.6   | 20,167.7   | 22,893.5  | 24,667.4     | 26,463.8  |
| Total comprehensive income                                              | 29,785.1   | 20,020.1   | 14,934.2  | 20,067.0     | 25,611.2  |
| Diluted earnings per share after<br>retroactive adjustment (NT\$/share) | 5.91       | 4.82       | 4.73      | 5.23         | 5.84      |
| Cash dividend (NT\$/share)                                              | 2.00379984 | 1.59718596 | 1.3776534 | 8.9(Notes 2) | (Notes 3) |
| Property, plant and equipment                                           | 151,587.1  | 149,997.1  | 143,880.2 | 135,168.4    | 214,592.6 |
| Total equity                                                            | 158,438.0  | 168,138.5  | 169,326.8 | 204,001.5    | 220,670.5 |
| Total assets                                                            | 333,984.8  | 365,006.2  | 357,922.5 | 363,857.8    | 533,371.2 |
| Number of employees                                                     | 68,100     | 65,789     | 66,711    | 68,753       | 93,891    |
| Total market value(Notes 4)                                             | 299,484.7  | 300,570.2  | 262,578.1 | 333,328.2    | 251,951.0 |

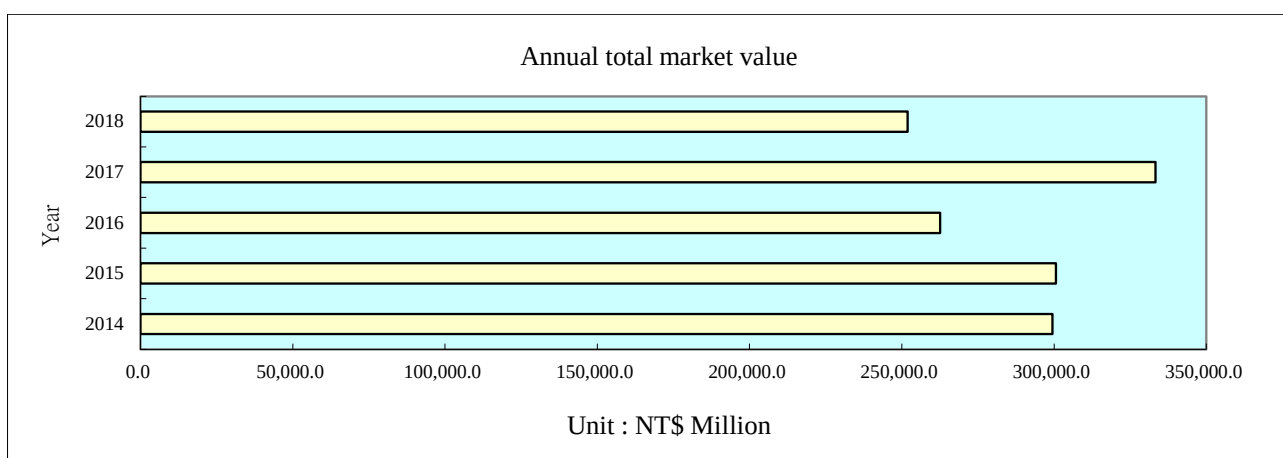
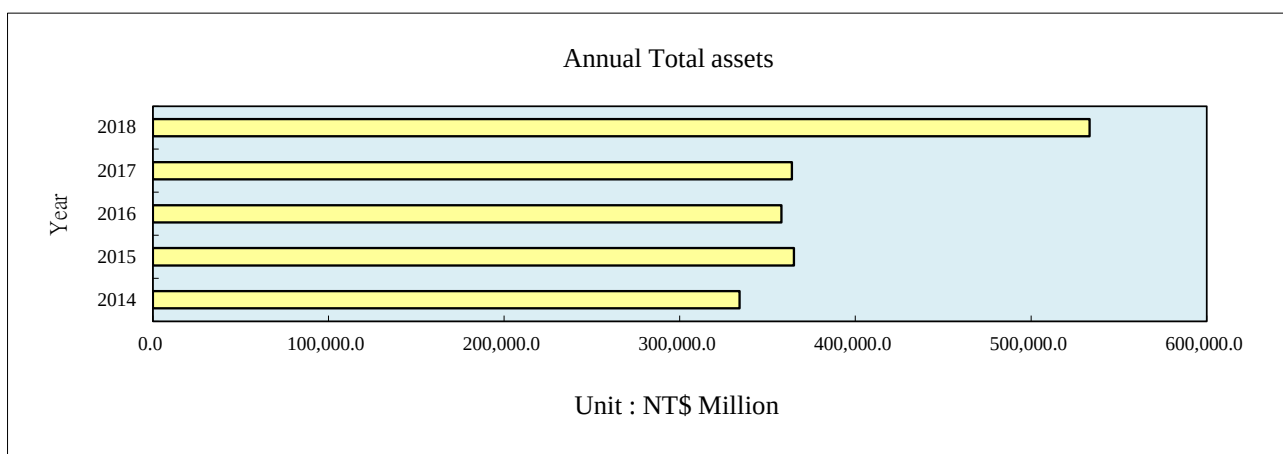
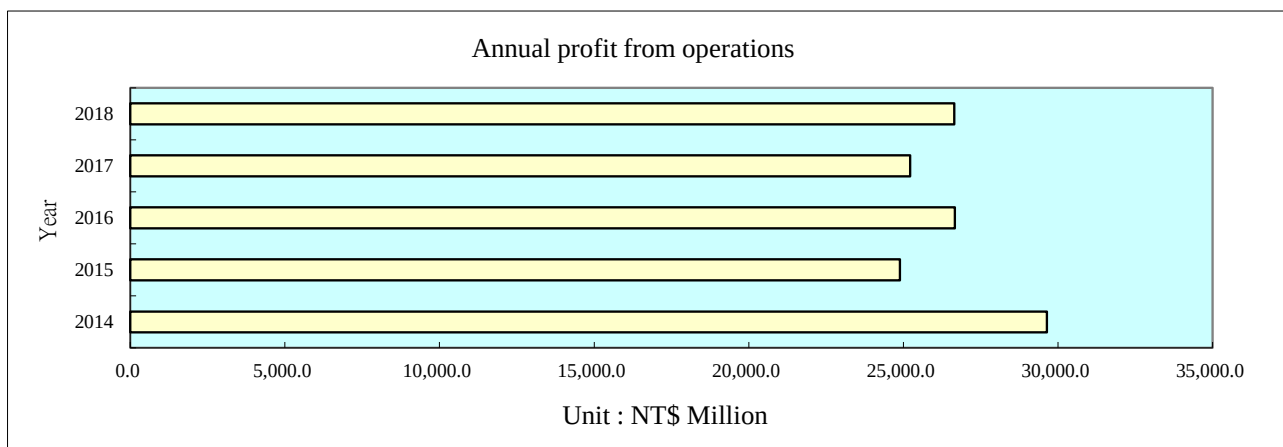
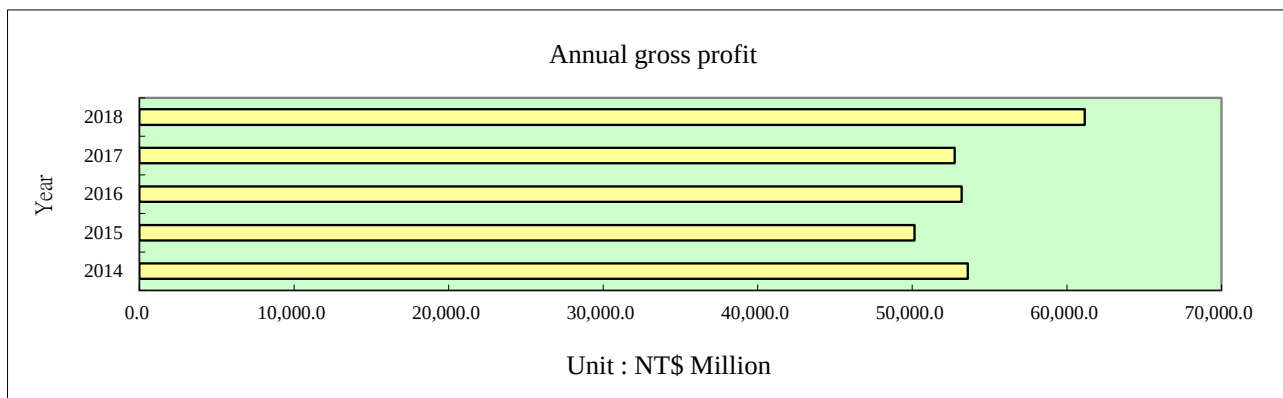
Notes 1: According to the Joint Share Exchange Agreement signed after the resolution the Boards of ASE and SPIL in June 2016, ASE Holding Co., viewed as a restructured organization under mutual control of ASE and SPIL, is a assumption of ASE in reality. Therefore, 2014~2017 financial information was based on the disclosure of the contents of ASE's consolidated financial statements.

Notes 2: Inclusive of the amount of cash paid to the capital reserve at US\$0.1 per share.

Notes 3: Will be Finalized after approval in General Shareholders' Meeting.

Notes 4: Total market value = end-of-year closing price × outstanding shares





## II. Company Profile

2.1 Date of Establishment: April 30, 2018

2.2 Milestones:

Company milestones are as follows:

Feb. 2018 : Advanced Semiconductor Engineering, Inc. (ASE) and Siliconware Precision Industries Co., Ltd. (SPIL) are committed to providing high-quality, efficient, and comprehensive assembly and testing services to ensure the future development and sustainability of the semiconductor industry. The companies have jointly established a new holding company that ensures fairness, reciprocity, and mutual benefits. After gaining majority approval in the ASE and SPIL Extraordinary General Meeting respectively held on February 12, 2018, ASE Technology Holding Co., Ltd. was formally established through Joint Share Exchange Agreement, and the request for listing on the Taiwan Stock Exchange was submitted pursuant to regulations.

Apr. 2018 : Following approval by the Taiwan Stock Exchange on March 26, 2018, ASE and SPIL suspended the public trading of company shares on 30 April 2018. ASE Technology Holding Co., Ltd. listed on the Taiwan Stock Exchange on the same day in the Semiconductor Industry category (TWSE code: 3711).

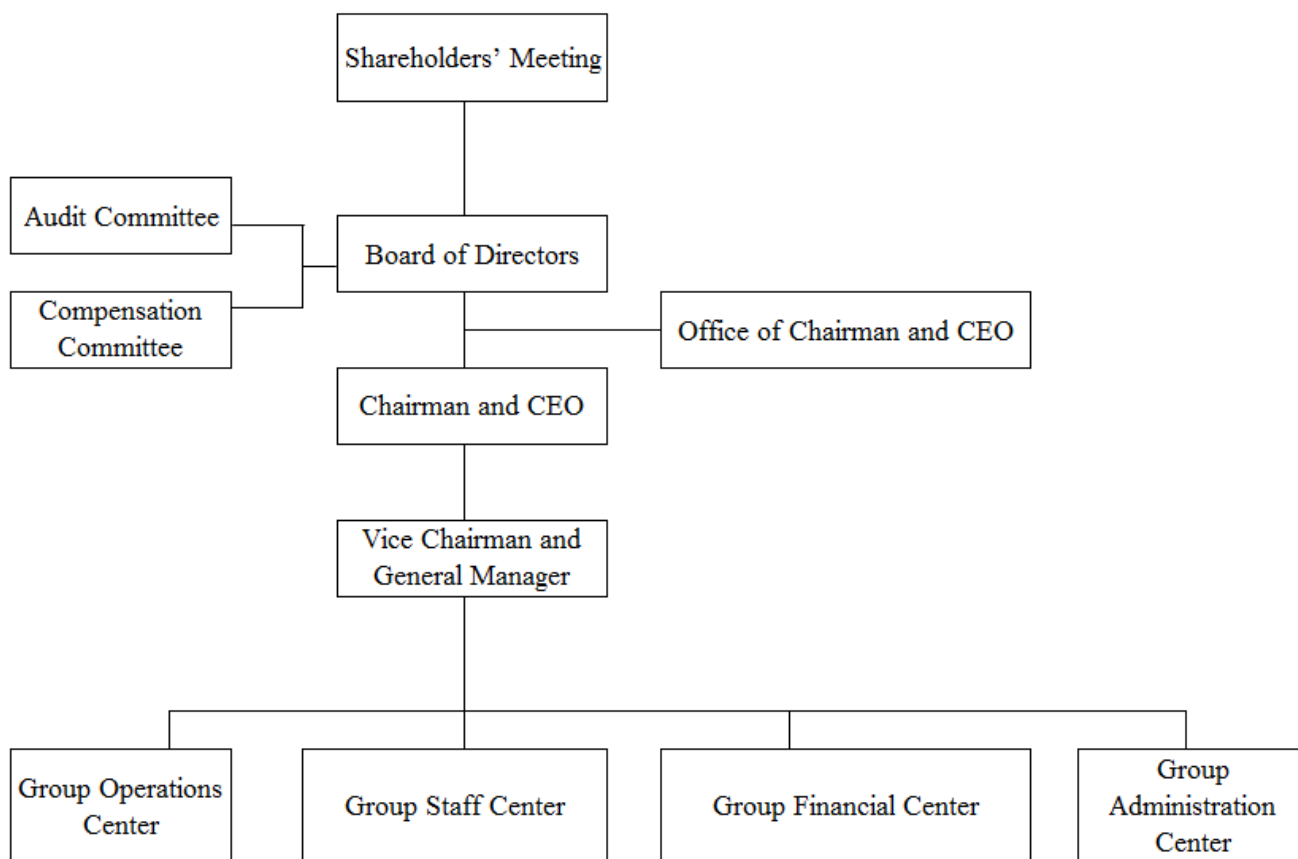
Jan. 2019 In order to integrate all resources and enhance the operational effectiveness of the Group, the Board of Directors made the resolution in December 2018 that the Company merges with USI Global Inc., the Company's subsidiary which the Company holds 100% of the subsidiary's shares. The reference date is set to be Jan. 31, 2019. After the merger, the Company becomes the surviving company and USI Global Inc. becomes the dissolved company.

Mr. Jason C.S. Chang, Chairman of the Company has been awarded an honorary Ph.D. in Engineering by National Sun Yat-sen University, as a recognition for his contribution to the semiconductor industry.

### III. Corporate Governance

#### 3.1 Organization

##### 3.1.1 Organizational Chart:





### 3.1.2 Major Corporate Operations:

#### ■ Office of Chairman and Chief Executive Officer

##### Department of ASE Group Audit:

Internal control, risk management, and assessment and confirmation of the validity of the governance procedures.

#### ■ ASE Group Operation Center

##### Office of the Group Chief Operating Officer:

The compilation of the Group's management reports, review, and analysis of the effectiveness of the Group's investment expenditures, coordination and integration across manufacturing plants, and implementation of the Group's policies.

#### ■ ASE Group Staff Center

##### Office of the Group Chief Officer of Staff:

Strategical and market planning, including research into and planning of the industry and market trends, the Company's operational performance, operational investment, and strategies.

#### ■ ASE Group Financial Center

##### Department of ASE Group Accounting Control:

Setting the Group's consolidated accounting policies and monitoring the compliance of Group's subsidiaries, generating consolidated financial statements, integrating and analyzing the Group's financial data, controlling the financial statements of the subsidiaries.

##### Department of ASE Group Board Secretariat:

Agenda management of functional committees, General Shareholders' Meetings, Board of Directors Meetings, publication of disclosed information (including material information) and reporting of public announcements, application and reporting of external investment cases (investment in Mainland China), generation and management of the Group's annual reports in Chinese and English, communication and coordination with competent authorities (Taiwan stock exchanges and Investment Commission), monitoring and management of information to be disclosed by the Group's subsidiaries.

##### Department of ASE Group Finance:

Investment assessment and planning, financial risk management, and capital movement.

##### Department of ASE Group Projects:

Integration and analysis of management reports, financial support of the ASEH, account operations, cost management, financial statement analysis, financial management, maintenance and development of the automation of report generation systems, stock affairs, etc.

##### Department of the Group Internal Control and Management:

Assessment and recommendation of the making of internal policies, operational procedures, management measures, and operational standards. Effectiveness evaluation of programming of the internal control system, disclosure of the group enterprise risk and promotion for the policies of enterprise risk management committee.

##### Department of ASE Group Investor Relations:

Management and maintenance of the relationship between the companies and investors. Communicating with the capital markets about the operational performance of the companies, strategical directions, fund allocation, corporate governance, Providing feedback on the suggestions and thoughts of the investors and capital markets about the companies to the management teams.

##### Department of ASE Group Public Relations:

Managing the Company's corporate images, establishing and maintaining the relationship with the media and other stakeholders, publishing disclosed information, planning and executing PR events, and risk handling.

■ **ASE Group Administration Center:**

Handling the Group's legal affairs, constructing and executing the Group's compliance topics, being responsible for the Group's corporate governance, and handling the Group's external relations.

Department of the ASE Group Corporate Sustainability:

Performance reporting, implementation, and management of corporate sustainability, including issues such as corporate governance, risks, compliance, climate change, research and development, innovation, environmental safety and health, employee care and development, supply chain management, and social engagement.

### 3.2 Information of Directors, Supervisors, General Manager, Vice Presidents, Assistant Vice Presidents, Officers of Departments and Branches:

#### 3.2.1 Information Regarding Directors (Date of this Annual Report: February 28, 2019)

Unit: Shares

| Title                     | Nationality or Place of Registration | Name                               | Gender | Date Elected | Term    | Date First Elected | Shareholding when Elected |        | Current Shareholding* |        | Current Shareholding of Spouse & Minor Children* |       | Shareholding in the Name of Others* |   | Major Education and Work Experience Current Positions at the Company or Other Companies***                                                                              | Other Officers, Directors or Supervisors who are the Spouse or a Relative Within Two Degrees of Kinship |                                |             |
|---------------------------|--------------------------------------|------------------------------------|--------|--------------|---------|--------------------|---------------------------|--------|-----------------------|--------|--------------------------------------------------|-------|-------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------|-------------|
|                           |                                      |                                    |        |              |         |                    | Shares                    | %      | Shares                | %      | Shares                                           | %     | Shares                              | % |                                                                                                                                                                         | Title                                                                                                   | Name                           | Relation    |
| Director                  | Hong Kong                            | A.S.E. Enterprises Limited         |        |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | —                                                                                                                                                                       | —                                                                                                       | —                              | —           |
| Director (Representative) | Singapore                            | Jason C.S.Chang (Chairman)         | M      |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | B.S. in Electrical Engineering, National Taiwan University<br>M.S. in Electrical Engineering, Illinois Institute of Technology                                          | Vice Chairman Director                                                                                  | Richard Chang Rutherford Chang | Brother Son |
|                           | Hong Kong                            | Richard H.P. Chang (Vice Chairman) | M      |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | B.S. in Industrial Engineering, Chung Yuan Christian University                                                                                                         | Chairman                                                                                                | Jason Chang                    | Brother     |
|                           | R.O.C.                               | Bough Lin                          | M      |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | B.S. in Electrophysics, National Chiao Tung University<br>Honorary Doctor, National Chiao Tung University                                                               | —                                                                                                       | —                              | —           |
|                           | R.O.C.                               | Chi-Wen Tsai                       | M      | 2018.06.21   | 3 years | 2018.02.12         | 684,327,886               | 15.84% | 684,327,886**         | 15.83% | —                                                | —     | —                                   | — | B.S. in Electrical Engineering, National Taipei University of Technology                                                                                                | —                                                                                                       | —                              | —           |
|                           | R.O.C.                               | Tien Wu                            | M      |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | Ph.D. in Applied Mechanics, University of Pennsylvania                                                                                                                  | —                                                                                                       | —                              | —           |
|                           | R.O.C.                               | Joseph Tung                        | M      |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | M.B.A., University of Southern California<br>Vice President of Corporate Finance, Citibank                                                                              | —                                                                                                       | —                              | —           |
|                           | R.O.C.                               | Raymond Lo                         | M      |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | B.S. in Electrophysics, National Chiao Tung University                                                                                                                  | —                                                                                                       | —                              | —           |
|                           | R.O.C.                               | TS Chen                            | M      |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | B.S. in Industrial Engineering and Management, Chung Yuan Christian University                                                                                          | —                                                                                                       | —                              | —           |
|                           | R.O.C.                               | Jeffrey Chen                       | M      |              |         |                    |                           |        |                       |        |                                                  |       |                                     |   | M.B.A., University of British Columbia<br>Vice President, Bankers Trust Company Taipei Branch                                                                           | —                                                                                                       | —                              | —           |
| Director                  | U.S.A.                               | Rutherford Chang                   | M      | 2018.06.21   | 3 years | 2018.02.12         | 1,577,647                 | 0.04%  | 1,577,647             | 0.04%  | —                                                | —     | —                                   | — | B.S. in Psychology, Wesleyan University                                                                                                                                 | Chairman                                                                                                | Jason Chang                    | Father      |
| Independent Director      | R.O.C.                               | Sheng-Fu You                       | M      | 2018.06.21   | 3 years | 2018.06.21         | —                         | —      | —                     | —      | 2,388                                            | 0.00% | —                                   | — | B.A. in Accounting, College of Management, National Taiwan University<br>M.S. in Accounting, National Chengchi University                                               | —                                                                                                       | —                              | —           |
| Independent Director      | U.S.A.                               | Ta-Lin Hsu                         | M      | 2018.06.21   | 3 years | 2018.06.21         | —                         | —      | —                     | —      | —                                                | —     | —                                   | — | B.S. in Physics, National Taiwan University<br>M.S. in Physics, NYU Tandon School of Engineering<br>Ph.D. in Electrical Engineering, University of California, Berkeley | —                                                                                                       | —                              | —           |
| Independent Director      | R.O.C.                               | Mei-Yueh Ho                        | F      | 2018.06.21   | 3 years | 2018.06.21         | —                         | —      | —                     | —      | —                                                | —     | —                                   | — | B.S. in Agricultural Chemistry, National Taiwan University                                                                                                              | —                                                                                                       | —                              | —           |

\* Shares are calculated up to the Date of this Annual Report.

\*\* As of the Date of this Annual Report, the number of pledged shares was 124,235,761shares.

\*\*\* See table below

**Current positions of the directors (and officers) of the Company:**

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| <p>Jason C.S. Chang</p> | <p>ASE Technology Holding Co., Ltd. – CEO, Chairman, and Director (representative)<br/>Advanced Semiconductor Engineering, Inc. – Chairman, and Director (representative)<br/>J&amp;R Industrial Inc. – Chairman and Director (representative)<br/>ASE Test Inc. – Chairman and Director (representative)<br/>ASE Test Holding, Ltd. – Director<br/>A.S.E. Holding Ltd. – Director<br/>J&amp;R Holding Ltd. – Director<br/>Innosource Ltd. – Director<br/>ASE Test Limited (Singapore) – Director<br/>ASE Investment (Kunshan) Limited – Chairman<br/>ASE Mauritius Inc. – Director<br/>ASE Corporation – Director<br/>ASE Labuan Inc. – Director<br/>Alto Enterprises Ltd. – Director<br/>Super Zone Holdings Ltd. – Director<br/>Anstock Limited – Director<br/>Anstock II Limited – Director<br/>Shanghai Ding Hui Real Estate Development Co., Ltd. – Chairman<br/>Shanghai Ding Wei Real Estate Development Co., Ltd. – Chairman<br/>Shanghai Ding Yu Real Estate Development Co., Ltd. – Chairman<br/>KunShan Ding Hong Real Estate Development Co., Ltd. – Chairman<br/>Shanghai Ding Qi Property Management Co., Ltd. – Chairman<br/>Shanghai Ding Fan Department Store Co., Ltd. – Chairman<br/>Shanghai Dingxu Property Management Co., Ltd. – Chairman<br/>Wealthy Joy Co. Ltd. – Director<br/>Beijing Dinggu Dinghao Industrial Co., Ltd. – Director<br/>Shanghai Ding Rong Real Estate Development Co., Ltd. – Director<br/>Chongqing Dinggu Real Estate Development Co., Ltd. – Director<br/>Shanghai Ding Xin Properties Co., Ltd. – Director<br/>Kunshan Ding Yao Real Estate Development Co., Ltd. – Supervisor<br/>Shanghai Ding Jia Real Estate Development Co., Ltd. – Supervisor<br/>Shanghai Ding Tong Real Estate Development Co., Ltd. – Supervisor<br/>Shanghai Hong Xiang Land Investment Co., Ltd. – Supervisor<br/>Shanghai Ming Long Construction and Development Co., Ltd. – Supervisor<br/>Shanghai Ding Yi Real Estate Development Co., Ltd. – Director<br/>True Elite Holdings Limited – Director<br/>Wenzhou Hongde Construction Development Co., Ltd. – Director<br/>Forest Symbol Limited – Director<br/>Excellent Worth Holdings Limited – Director<br/>ASE Enterprises – Director<br/>Ding-Chang Investment Co., Ltd. – Director<br/>Ding-Ku Investment Co., Ltd. – Director<br/>Wan-Chang Investment Co., Ltd. – Director<br/>Wan-Ya Investment Co., Ltd. – Director<br/>Wei-Tung Investment Co., Ltd. – Director<br/>Rei-Chang Investment Co., Ltd. – Director<br/>Shao-Chang Investment Co., Ltd. – Director<br/>Jai-Cing Investment Co., Ltd. – Director<br/>Jai-Ying Investment Co., Ltd. – Director<br/>Ming-Tung Investment Co., Ltd. – Director<br/>Ming-Shiang Investment Co., Ltd. – Director</p> | <p>Chi-Chang Investment Co., Ltd. – Director<br/>Value Tower Limited – Director<br/>Aintree Limited – Director<br/>JC Holdings Limited – Director</p> <p>Richard H.P. Chang</p> <p>ASE Technology Holding Co., Ltd. – Vice Chairman, General Manager and Director (representative)<br/>J&amp;R Industrial Inc. – Director (representative)<br/>Innosource Ltd. – Director<br/>Omniquest Industrial Ltd. – Director<br/>ASE Test Limited (Singapore) – Director<br/>A.S.E. Holding Ltd. – Director<br/>J&amp;R Holding Ltd. – Director<br/>GAPT-Cayman – Director<br/>Advanced Semiconductor Engineering (HK) Limited – Chairman<br/>Alto Enterprises Ltd. – Director<br/>Super Zone Holdings Ltd. – Director<br/>Anstock Limited – Director<br/>Universal Global Electronics Co., Ltd. – Director<br/>Real Tech Holdings Limited – Director<br/>Sino Horizon Holdings Limited – Chairman<br/>Wealthy Joy Co. Ltd. – Director<br/>Peak Vision International Limited – Director<br/>Peak Paramount International Limited – Director<br/>Great Sino Development Ltd. – Director<br/>Sino Engine Group Limited – Director<br/>Fairwheel Holdings Limited – Director<br/>Imperial Corporation Limited – Director<br/>Beijing Dinggu Dinghao Industrial Co., Ltd. – Chairman<br/>Shanghai Ding Gu Properties Co., Ltd. – Chairman<br/>Shanghai Ding Jia Real Estate Development Co., Ltd. – Chairman<br/>Shanghai Ding Tong Real Estate Development Co., Ltd. – Chairman<br/>Shanghai Hong Xiang Land Investment Co., Ltd. – Chairman<br/>Shanghai Ming Long Construction and Development Co., Ltd. – Chairman<br/>Shanghai Ding Rong Real Estate Development Co., Ltd. – Chairman<br/>Shanghai Ding Lin Real Estate Development Co., Ltd. – Chairman<br/>Shanghai Ding Xin Properties Co., Ltd. – Chairman<br/>Kunshan Ding Yao Real Estate Development Co., Ltd. – Chairman<br/>Chongqing Dinggu Real Estate Development Co., Ltd. – Chairman<br/>Shanghai Sun Moon Light Department Stores Co., Ltd. – Director<br/>Chongqing Dinggu Property Management Co., Ltd. – Executive Director<br/>Shanghai Ding Yi Real Estate Development Co., Ltd. – Chairman<br/>Wuxi Ding Gu Real Estate Development Co., Ltd. – Executive Director<br/>Wenzhou Hongde Construction Development Co., Ltd. – Director<br/>Chongqing Dinggu Market Management Co., Ltd. – Executive Director<br/>Shanghai Ding Gu Property Management Co., Ltd. – Executive Director<br/>Shanghai He Meng Supermarket Management Co., Ltd. – Executive Director<br/>ASE Enterprises – Director<br/>Warm Land Development Ltd. – Director<br/>Jai-Ying Investment Co., Ltd. – Director<br/>Ming-Shiang Investment Co., Ltd. – Director<br/>Ming-Tung Investment Co., Ltd. – Director<br/>Rei-Chang Investment Co., Ltd. – Director<br/>Jai-Cing Investment Co., Ltd. – Director<br/>Wei-Tung Investment Co., Ltd. – Director</p> |
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|              | Shao-Chang Investment Co., Ltd. – Director<br>Chi-Chang Investment Co., Ltd. – Director<br>Ding-Chang Investment Co., Ltd. – Director<br>Wan-Chang Investment Co., Ltd. – Director<br>Wan-Ya Investment Co., Ltd. – Director<br>Ding-Ku Investment Co., Ltd. – Director                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              | Co., Ltd. – Director (representative)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Bough Lin    | ASE Technology Holding Co., Ltd. –Director (representative)<br>Siliconware Precision Industries Co., Ltd. – Chairman and Director (representative)<br>SPIL (B.V.I.) Holding Limited– Director<br>Siliconware Investment Co., Ltd. – Director (representative)<br>Siliconware USA, Inc. – Director                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Raymond Lo   | ASE Technology Holding Co., Ltd. – Director (representative)<br>Advanced Semiconductor Engineering, Inc. – Director (representative) and General Manager of the Kaohsiung Plant<br>ASE Test Inc. – Director (representative) and General Manager                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Chi-Wen Tsai | ASE Technology Holding Co., Ltd. –Director (representative)<br>Siliconware Precision Industries Co., Ltd. – Vice Chairman and Director(representative)<br>Siliconware Investment Co., Ltd. – Director (representative)<br>Siliconware USA, Inc. – Director<br>SPIL (Cayman) Holding Limited– Director<br>Siliconware Technology (Suzhou) Ltd. – Director<br>Siliconware Electronics (Fujian) Ltd. – Director                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TS Chen      | ASE Technology Holding Co., Ltd. –Director (representative)<br>Advanced Semiconductor Engineering, Inc. – Director (representative) and General Manager of the Chungli Plant<br>ASE Test Inc. – Director (representative)<br>ASE (Weihai) Inc. – Director<br>ASE (Kunshan) Inc. – Director<br>Lu-Chu Development Corporation – Director (representative)<br>Suzhou ASEN Semiconductors Co., Ltd. – Supervisor<br>Universal Scientific Industrial (Shanghai) Co., Ltd. – Director                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Tien Wu      | ASE Technology Holding Co., Ltd. – Group COO, and Director (representative)<br>Advanced Semiconductor Engineering, Inc. – CEO, and General Manager<br>ASE Electronics Inc. – Chairman (representative)<br>ASE (Shanghai) Inc. – Chairman<br>ASE (Kunshan) Inc. – Chairman<br>ASE (Korea) Inc. – Director<br>ASE Electronics (Malaysia) Sdn. Bhd. – Chairman<br>ISE Labs, Inc. – Chairman<br>ASE Singapore Pte. Ltd. – Chairman<br>ASE Japan Co., Ltd. –Director<br>ASE Marketing & Service Japan Co., Ltd. – Director<br>GAPT-Cayman – Director<br>ASE Assembly & Test (Shanghai) Limited – Chairman<br>Suzhou ASEN Semiconductors Co., Ltd. – Chairman<br>ASE (Weihai) Inc. – Chairman<br>Wuxi Tongzhi Microelectronics Co., Ltd. – Chairman<br>ISE labs, China. Ltd. – Chairman<br>USI Inc. – CEO and Director (representative)                                                                                                                                                                                                           | Jeffrey Chen | ASE Technology Holding Co., Ltd. –Director (representative)<br>Advanced Semiconductor Engineering, Inc. – Director (representative) and General Manager<br>ASE Test Inc. – Director (representative)<br>ASE (Shanghai) Inc. – Supervisor<br>ASE (Kunshan) Inc. – Supervisor<br>ASE (Korea) Inc. – Supervisor<br>ASE (Weihai) Inc. – Supervisor<br>Wuxi Tongzhi Microelectronics Co., Ltd. – Director<br>ASE Test Limited (Singapore) – Director<br>ASE Test Holdings Ltd. – Director<br>Omniquest Industrial Ltd. – Director<br>ISE Labs, Inc. – Director<br>ASE Assembly & Test (Shanghai) Limited – Supervisor<br>Shanghai Ding Hui Real Estate Development Co., Ltd. –Director<br>ASE Electronics Inc. – Director (representative)<br>Advanced Semiconductor Engineering (HK) Limited – Director<br>Suzhou ASEN Semiconductors Co., Ltd. – Director<br>Shanghai Ding Wei Real Estate Development Co., Ltd. –Director<br>Shanghai Ding Yu Real Estate Development Co., Ltd. –Director<br>KunShan Ding Hong Real Estate Development Co., Ltd. –Director<br>Shanghai Ding Qi Property Management Co., Ltd. – Director<br>Shanghai Ding Fan Department Store Co., Ltd. – Director<br>Shanghai Dingxu Property Management Co., Ltd. – Director<br>Super Zone Holdings Ltd. – Director<br>USI Inc. – Chairman and Director (representative)<br>Huntington Holdings International Co. Ltd. – Director<br>Mercuries and Associates Holding Ltd. – Independent Director, Member of the Audit Committee and Member of the Compensation Committee<br>Universal Scientific Industrial Co., Ltd – Director (representative)<br>Universal Scientific Industrial (Shanghai) Co., Ltd. – Chairman<br>Universal Scientific Industrial (Kunshan) Co., Ltd. – Chairman<br>USI Enterprise Limited – Director<br>Universal Global Technology (Kunshan) Co., Ltd. – |
| Joseph Tung  | ASE Technology Holding Co., Ltd. – Group CFO, and Director (representative)<br>Advanced Semiconductor Engineering, Inc. – CFO, and Director (representative)<br>J&R Industrial Inc. – Director (representative)<br>ASE Japan Co., Ltd. – Supervisor<br>ASE Marketing & Service Japan Co., Ltd. – Supervisor<br>Innosource Ltd. – Director<br>J&R Holding Ltd. – Director<br>A.S.E. Holding Ltd. – Director<br>Omniquest Industrial Ltd. – Director<br>ASE Test Holding, Ltd. – Director<br>ASE (Korea) Inc. – Director<br>ASE Electronics (Malaysia) Sdn. Bhd. – Director<br>ASE Mauritius Inc. – Director<br>ASE Labuan Inc. – Director<br>ASE Corporation – Director<br>Alto Enterprises Ltd. – Director<br>Anstock Limited – Director<br>Lu-Chu Development Corporation – Director (representative)<br>Wuxi Tongzhi Microelectronics Co., Ltd. – Supervisor<br>Advanced Microelectronic Products Inc. – Director (representative)<br>TLJ Intertech Inc. – Director and General Manager<br>Asia Pacific Emerging Industry Venture Capital |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|                     | Chairman<br>Universal Global Technology Co., Limited –Director<br>Universal Global Industrial Co., Limited –Director<br>Universal Global Scientific Industrial Co., Ltd. –<br>Director (representative)<br>USI Electronics (Shenzhen) Co., Ltd. –Director<br>Universal Global Technology (Shanghai) Co., Ltd. –<br>Chairman<br>Universal Global Electronics (Shanghai) Co., Ltd. –<br>Chairman                                                                                                                                                                                                           |
| Rutherford<br>Chang | ASE Technology Holding Co., Ltd. – Director<br>Advanced Semiconductor Engineering, Inc. –<br>Director (representative)<br>ASE Test Inc. – Director (representative)<br>ASE Investment (Kunshan) Limited – Director<br>Universal Scientific Industrial (Shanghai) Co., Ltd. –<br>Director<br>USI Inc. – Director (representative)<br>Beijing Dinggu Dinghao Industrial Co., Ltd. –<br>Director                                                                                                                                                                                                            |
| Sheng-Fu<br>You     | ASE Technology Holding Co., Ltd. – Independent<br>Director, Member of the Audit Committee, Member<br>of the Compensation Committee<br>Advanced Semiconductor Engineering, Inc. –<br>Member of the Compensation Committee<br>Arima Lasers Corp. – Director<br>Dynapack International Technology Corporation –<br>Supervisor<br>San Fu Chemical Co., Ltd. – Supervisor<br>Arima Communications Corp. – Director                                                                                                                                                                                            |
| Ta-Lin Hsu          | ASE Technology Holding Co., Ltd. – Independent<br>Director, Member of the Audit Committee, Member<br>of the Compensation Committee<br>Advanced Semiconductor Engineering, Inc. –<br>Member of the Compensation Committee<br>H&Q Asia Pacific – President and Founder<br>H&Q Asia Pacific, Ltd. – Chairman                                                                                                                                                                                                                                                                                                |
| Mei-Yueh<br>Ho      | ASE Technology Holding Co., Ltd. – Independent<br>Director, Member of the Audit Committee<br>Au Optonics Corp. – Independent Director and<br>Member of the Audit Committee<br>Bank of Kaohsiung – Independent Director, Member<br>of the Audit Committee, Member of the<br>Compensation Committee<br>Kinpo Electronics, Inc. – Independent Director,<br>Member of the Audit Committee, Member of the<br>Compensation Committee                                                                                                                                                                           |
| David Pan           | ASE Technology Holding Co., Ltd. – Group Chief of<br>Staff<br>ASE Marketing & Service Japan Co., Ltd. – Director<br>ASE Japan Co., Ltd. – Director<br>ASE Test Holdings, Ltd. – Director<br>ISE Labs, Inc. – Director<br>ASE Test Inc. – Director (representative)<br>Lu-Chu Development Corporation – Chairman and<br>Director (representative)<br>TLJ Intertech Inc. – Chairman and Director<br>(representative)<br>MingFung Information Service Corp., Ltd. –<br>Chairman and Director (representative)<br>ASE Electronics Inc. – Supervisor (representative)<br>USI Inc. – Director (representative) |

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| Dtuang<br>Wang | ASE Technology Holding Co., Ltd. – Group CAO<br>Advanced Semiconductor Engineering, Inc. –<br>Director (representative), CAO<br>Advanced Semiconductor Engineering (China) Ltd. –<br>Chairman and General Manager<br>Universal Scientific Industrial (Shanghai) Co., Ltd. –<br>Director<br>ASE Cultural and Educational Foundation – Director<br>and CEO<br>Hung Ching Development & Construction Co., Ltd. –<br>Director<br>Hung Chin Hsin Co., Ltd. – Director<br>Sino Horizon Holdings Limited – Director<br>Chang Yao Hong-Ying Social Welfare & Charity<br>Foundation – CEO |
| Murphy<br>Kuo  | ASE Technology Holding Co., Ltd. – VP and Group<br>Controller<br>Advanced Semiconductor Engineering, Inc. – VP and<br>Controller<br>ASE Test Inc. – Supervisor (representative)<br>Anstock II Limited – Director<br>Lu-Chu Development Corporation – Director<br>(representative)                                                                                                                                                                                                                                                                                                |
| Alan Li        | ASE Technology Holding Co., Ltd. – VP<br>Anstock Limited II – Director<br>ASE Test Inc. – Director (representative)<br>Lu-Chu Development Corporation – Director<br>(representative)<br>TLJ Intertech Inc. – Director (representative)<br>Advanced Semiconductor Engineering (China) Ltd. –<br>Supervisor<br>USI Inc. – Director (representative)                                                                                                                                                                                                                                |
| Anne<br>Chang  | ASE Technology Holding Co., Ltd. – VP<br>ASE Test Inc. – Director (representative)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Peili Shen     | ASE Technology Holding Co., Ltd. – VP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Eddie<br>Chang | ASE Technology Holding Co., Ltd. – VP<br>Lu-Chu Development Corporation – Supervisor<br>MingFung Information Service Corp., Ltd. –<br>Supervisor (representative)                                                                                                                                                                                                                                                                                                                                                                                                                |

Table 1.1 List of Main Shareholders of the Directors that are Institutional Shareholders

February 28, 2019

| Institutional Shareholder  | Main Shareholder of Institutional Shareholder | Shareholding Ratio |
|----------------------------|-----------------------------------------------|--------------------|
| A.S.E. Enterprises Limited | Aintree Limited                               | 100.00%            |

Table 1.2 List of Main Shareholders of the Institutional Shareholders Whose Main Shareholders are Institutional Holders

February 28, 2019

| Institutional Shareholder | Main Shareholder of Institutional Shareholder | Shareholding Ratio |
|---------------------------|-----------------------------------------------|--------------------|
| Aintree Limited           | JC Holdings Limited                           | 100.00%            |

Table 1.3 Professional Background and Independence of Directors (2019.02.28)

| Criteria           | Has at least 5 years of work experience and meet one of the following professional qualifications                                                                                                                      |                                                                                                                                                                                                                                                 |                                                                                                                                     | Qualification regarding the independence criteria          |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                        |                                                                                                                                                                                                                       |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                     |                                                                                                                              |                                                                                  |                                                                                                              | Number of other public companies in which subject serves as independent director |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
|                    | An instructor or higher in a department of commerce, law, finance, accounting, or other academic department related to the business needs of the Company in a public or private junior college, college, or university | A judge, public prosecutor, attorney, certified public accountant, or other professional or technical specialist who has passed a national examination and been awarded a certificate in a profession necessary for the business of the Company | Have work experience in the area of commerce, law, finance, or accounting, or other field necessary for the business of the Company | 1. Not an employee of the Company or any of its affiliates | 2. Not a director or supervisor of the Company or any of its affiliates. The same does not apply, however, in cases where the person is an independent director of the Company, its parent company, or any subsidiary, as appointed in accordance with the laws of Taiwan or with the laws of the country of the parent company or subsidiary | 3. Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under other names, in an aggregate amount of one percent or more of the total number of issued shares of the company or ranking as one of its top ten shareholders | 4. Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the above persons in the preceding three subparagraphs | 5. Not a director, supervisor, or employee of a institutional shareholder that directly holds five percent or more of the total number of issued shares of the Company or ranking as one of its top five shareholders | 6. Not a director, supervisor, officer, or shareholder holding five percent or more of the shares of a specified company or institution that has a financial or business relationship with the Company | 7. Not a professional individual who, or an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that provides commercial, legal, financial, accounting services or consultation to the Company or to any affiliate of the Company, or a spouse thereof, | 8. Not having a marital relationship, or a relative within the second degree of kinship to any other director of the Company | 9. Not subject to any of the conditions defined in Article 30 of the Company Law | 10. Not a governmental or juridical person or its representative as defined in Article 27 of the Company Law |                                                                                  |
| Name               |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 |                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                        |                                                                                                                                                                                                                       |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                     |                                                                                                                              |                                                                                  |                                                                                                              |                                                                                  |
| Jason C.S. Chang   |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                        |                                                                                                                                                                                                                       |                                                                                                                                                                                                        | V                                                                                                                                                                                                                                                                                                                   |                                                                                                                              | V                                                                                |                                                                                                              | 0                                                                                |
| Richard H.P. Chang |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                        | V                                                                                                                                                                                                                     |                                                                                                                                                                                                        | V                                                                                                                                                                                                                                                                                                                   |                                                                                                                              | V                                                                                |                                                                                                              | 0                                                                                |
| Bough Lin          |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                |                                                                                                              | 0                                                                                |
| Chi-Wen Tsai       |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                |                                                                                                              | 0                                                                                |
| Tien Wu            |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                |                                                                                                              | 0                                                                                |
| Joseph Tung        |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     |                                                                                                                                                                                                        | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                |                                                                                                              | 0                                                                                |
| Raymond Lo         |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                |                                                                                                              | 0                                                                                |
| TS Chen            |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                |                                                                                                              | 1                                                                                |
| Jeffrey Chen       |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     |                                                                                                                                                                                                        | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                |                                                                                                              | 0                                                                                |
| Rutherford Chang   |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                        | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   |                                                                                                                              | V                                                                                | V                                                                                                            | 0                                                                                |
| Sheng-Fu You       | V                                                                                                                                                                                                                      | V                                                                                                                                                                                                                                               | V                                                                                                                                   | V                                                          | V                                                                                                                                                                                                                                                                                                                                             | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                | V                                                                                                            | 0                                                                                |
| Ta-Lin Hsu         |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   | V                                                          | V                                                                                                                                                                                                                                                                                                                                             | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                | V                                                                                                            | 0                                                                                |
| Mei-Yueh Ho        |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   | V                                                          | V                                                                                                                                                                                                                                                                                                                                             | V                                                                                                                                                                                                                                                                                                               | V                                                                                                                                                                                      | V                                                                                                                                                                                                                     | V                                                                                                                                                                                                      | V                                                                                                                                                                                                                                                                                                                   | V                                                                                                                            | V                                                                                | V                                                                                                            | 3                                                                                |



### 3.2.2 Information Regarding Management Team

Unit: Shares (actual number of shares as of the date of this annual report)

| Title                               | Nationality | Name               | Gender | On-board Date | Shareholding |       | Spouse & Minor |       | Shareholding by Nominee Arrangement |        | Education & Selected Past Positions                                                                                                                                                                                                                                                                                                                         | Current Positions at Other Companies | Officers who are the Spouse or a Relative Within Two Degrees of Kinship |                                        |                |
|-------------------------------------|-------------|--------------------|--------|---------------|--------------|-------|----------------|-------|-------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------|----------------------------------------|----------------|
|                                     |             |                    |        |               | Shares       | %     | Shares         | %     | Shares                              | %      |                                                                                                                                                                                                                                                                                                                                                             |                                      | Title                                                                   | Name                                   | Relation       |
| Group CEO                           | Singapore   | Jason C.S. Chang   | M      | 2018.04       | 4,836,678    | 0.11% | 160,000        | 0.00% | 944,516,028*                        | 21.85% | B.S. in Electrical Engineering, National Taiwan University<br>M.S. in Electrical Engineering, Illinois Institute of Technology                                                                                                                                                                                                                              | Please refer to page 12              | Vice Chairman<br>Director                                               | Richard H.P. Chang<br>Rutherford Chang | Brother<br>Son |
| General Manager                     | Hong Kong   | Richard H.P. Chang | M      | 2018.04       | —            | —     | —              | —     | 124,175,228                         | 2.87%  | B.S. in Industrial Engineering, Chung Yuan Christian University                                                                                                                                                                                                                                                                                             | Please refer to page 12              | Chairman                                                                | Jason C.S. Chang                       | Brother        |
| Group COO                           | R.O.C.      | Tien Wu            | M      | 2018.04       | 3,877,473    | 0.09% | —              | —     | —                                   | —      | Ph.D. in Applied Mechanics, University of Pennsylvania                                                                                                                                                                                                                                                                                                      | Please refer to page 13              | —                                                                       | —                                      | —              |
| Group CFO                           | R.O.C.      | Joseph Tung        | M      | 2018.04       | 2,602,954    | 0.06% | 137,457        | 0.00% | —                                   | —      | M.B.A., University of Southern California<br>Vice President of Corporate Finance, Citibank                                                                                                                                                                                                                                                                  | Please refer to page 13              | —                                                                       | —                                      | —              |
| Group Chief of Staff                | R.O.C.      | David Pan          | M      | 2018.08       | 925,015      | 0.02% | —              | —     | —                                   | —      | B.S. in Physics, Illinois Institute of Technology<br>Ph.D. in Physics, University of California, Berkeley                                                                                                                                                                                                                                                   | Please refer to page 14              |                                                                         |                                        |                |
| Group CAO                           | R.O.C.      | Dtuang Wang        | M      | 2018.04       | 50,000       | 0.00% | —              | —     | —                                   | —      | Ph.D. in Law, National Chengchi University<br>Member, Fair Trade Commission<br>Professor and Dean, School of Law, Ming Chuan University<br>Chief Secretary, Bureau of Standards, Metrology and Inspection<br>Research Associate, Institute of International Relations<br>Head of Department of Law Affairs, Hung Ching Development & Construction Co., Ltd. | Please refer to page 14              | —                                                                       | —                                      | —              |
| Vice President and Group Controller | R.O.C.      | Murphy Kuo         | M      | 2018.04       | 160,500      | 0.00% | —              | —     | —                                   | —      | M.B.A., Boston University                                                                                                                                                                                                                                                                                                                                   | Please refer to page 14              |                                                                         |                                        |                |
| Vice President                      | R.O.C.      | Alan Li            | M      | 2018.04       | 210,091      | 0.00% | —              | —     | —                                   | —      | M.B.A., University of California                                                                                                                                                                                                                                                                                                                            | Please refer to page 14              | —                                                                       | —                                      | —              |
| Vice President                      | R.O.C.      | Anne Chang         | F      | 2018.04       | 642,238      | 0.01% | 56,473         | 0.00% | —                                   | —      | Master of Management Science in Industrial and Information Management, National Cheng Kung University                                                                                                                                                                                                                                                       | Please refer to page 14              | —                                                                       | —                                      | —              |
| Vice President                      | R.O.C.      | Peili Shen         | F      | 2018.08       | 67,582       | 0.00% | 38             | 0.00% | —                                   | —      | B.S., Finance, National Taiwan University                                                                                                                                                                                                                                                                                                                   | Please refer to page 14              |                                                                         |                                        |                |
| Vice President                      | R.O.C.      | Eddie Chang        | M      | 2018.04       | 60,506       | 0.00% | —              | —     | —                                   | —      | M.B.A., University of Massachusetts                                                                                                                                                                                                                                                                                                                         | Please refer to page 14              | —                                                                       | —                                      | —              |

\* The number of pledged shares was 124,235,761 shares.

### 3.3 Remuneration for Directors, Supervisors, General Manager, and Vice President

#### 3.3.1 Remuneration for Directors

December 31, 2018

Units: Shares in thousands; NT\$ in thousands

| Title                     | Name                               | Directors' remuneration |                                |                                |                                |                                |                                |                |                                | Total Remuneration (A+B+C+D) as a percentage of net income after tax |                                | Remuneration from concurrent position as employee |                                |
|---------------------------|------------------------------------|-------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------|--------------------------------|----------------------------------------------------------------------|--------------------------------|---------------------------------------------------|--------------------------------|
|                           |                                    | Base Compensation (A)   |                                | Severance Pay and Pensions (B) |                                | Compensation to Directors (C)* |                                | Allowances (D) |                                |                                                                      |                                | Base Compensation, Bonuses, and Allowances (E)*** |                                |
|                           |                                    | ASEH                    | From All Consolidated Entities | ASEH                           | From All Consolidated Entities | ASEH                           | From All Consolidated Entities | ASEH           | From All Consolidated Entities | ASEH                                                                 | From All Consolidated Entities | ASEH                                              | From All Consolidated Entities |
| Director                  | A.S.E. Enterprises Limited         | 4,725                   | 4,725                          | —                              | —                              | 34,070                         | 34,070                         | —              | —                              | 0.15%                                                                | 0.15%                          | 287,973                                           | 287,973                        |
| Director (representative) | Jason C.S. Chang (Chairman)        |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
|                           | Richard H.P. Chang (Vice Chairman) |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
|                           | Bough Lin                          |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
|                           | Chi-Wen Tsai                       |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
|                           | Tien Wu                            |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
|                           | Joseph Tung                        |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
|                           | Raymond Lo                         |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
|                           | TS Chen                            |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
|                           | Jeffrey Chen                       |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
| Director                  | Rutherford Chang                   |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
| Independent Director      | Sheng-Fu You                       |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
| Independent Director      | Ta-Lin Hsu                         |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |
| Independent Director      | Mei-Yueh Ho                        |                         |                                |                                |                                |                                |                                |                |                                |                                                                      |                                |                                                   |                                |

| Title                        | Name                                  | Remuneration from concurrent position as employee |                                   |                                                    |       |                                |       | Total Compensation (A+B+ C+D+E+F+G)<br>as a percentage of net income after tax |                                | Compensation Paid to<br>Directors from Non-<br>consolidated Affiliates |
|------------------------------|---------------------------------------|---------------------------------------------------|-----------------------------------|----------------------------------------------------|-------|--------------------------------|-------|--------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------|
|                              |                                       | Severance Pay and Pensions (F)**                  |                                   | Profit distribution for employee remuneration (G)* |       |                                |       |                                                                                |                                |                                                                        |
|                              |                                       | ASEH                                              | From All<br>Consolidated Entities | ASEH                                               |       | From All Consolidated Entities |       | ASEH                                                                           | From All Consolidated Entities |                                                                        |
|                              |                                       |                                                   |                                   | Cash                                               | Stock | Cash                           | Stock |                                                                                |                                |                                                                        |
| Director                     | A.S.E. Enterprises Limited            | 267                                               | 267                               | 293,244                                            | —     | 293,244                        | —     | 2.46%                                                                          | 2.46%                          | None                                                                   |
| Director<br>(representative) | Jason C.S. Chang<br>(Chairman)        |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
|                              | Richard H.P. Chang<br>(Vice Chairman) |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
|                              | Bough Lin                             |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
|                              | Chi-Wen Tsai                          |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
|                              | Tien Wu                               |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
|                              | Joseph Tung                           |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
|                              | Raymond Lo                            |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
|                              | TS Chen                               |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
|                              | Jeffrey Chen                          |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
| Director                     | Rutherford Chang                      |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
| Independent Director         | Sheng-Fu You                          |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
| Independent Director         | Ta-Lin Hsu                            |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |
| Independent Director         | Mei-Yueh Ho                           |                                                   |                                   |                                                    |       |                                |       |                                                                                |                                |                                                                        |

\* Director and employee remuneration amounted to NT\$34.070 million and NT\$45.430 million, respectively (paid in cash) for 2018 as decided in the Meeting of the Board of Directors

held on March 28, 2019. The allocation of employee bonuses was not yet available on the date of this annual report. Therefore, allocations are based on the actual allocations of the previous year. Allocations will be determined after the approval in the General Shareholders' Meeting for the year

\*\* Total severance pay and retirement pensions belong to the contribution of retirement benefit expenses.

\*\*\* : The amount of this column does not include the Employee Stock Options Expenses of the Company and all the companies listed in the financial report, which is NT\$ 5,471 thousand.

### Range of Remuneration

| Remuneration Range of Directors          | Names of Directors                                                                                                                       |                                                                                                                                          |                                                                         |                                                                                                      |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                                          | Total remuneration (A+B+C+D)                                                                                                             |                                                                                                                                          | Total remuneration (A+B+C+D+E+F+G)                                      |                                                                                                      |
|                                          | ASEH                                                                                                                                     | From All Consolidated Entities                                                                                                           | ASEH                                                                    | From All Consolidated Entities                                                                       |
| Less than NT\$2,000,000                  | Sheng-Fu You, Ta-Lin Hsu, Mei-Yueh Ho                                                                                                    | Sheng-Fu You, Ta-Lin Hsu, Mei-Yueh Ho                                                                                                    | Bough Lin, Chi-Wen Tsai, Tien Wu, Sheng-Fu You, Ta-Lin Hsu, Mei-Yueh Ho | Sheng-Fu You, Ta-Lin Hsu, Mei-Yueh Ho                                                                |
| NT\$2,000,000 (incl.) - NT\$5,000,000    | Jason C.S. Chang, Richard H.P. Chang, Bough Lin, Chi-Wen Tsai, Tien Wu, Joseph Tung, Raymond Lo, TS Chen, Jeffrey Chen, Rutherford Chang | Jason C.S. Chang, Richard H.P. Chang, Bough Lin, Chi-Wen Tsai, Tien Wu, Joseph Tung, Raymond Lo, TS Chen, Jeffrey Chen, Rutherford Chang | Joseph Tung, Raymond Lo, TS Chen, Jeffrey Chen, Rutherford Chang        | Rutherford Chang                                                                                     |
| NT\$5,000,000 (incl.) - NT\$10,000,000   | —                                                                                                                                        | —                                                                                                                                        | —                                                                       | —                                                                                                    |
| NT\$10,000,000 (incl.) - NT\$15,000,000  | —                                                                                                                                        | —                                                                                                                                        | —                                                                       | —                                                                                                    |
| NT\$15,000,000 (incl.) - NT\$30,000,000  | —                                                                                                                                        | —                                                                                                                                        | Richard H.P. Chang                                                      | —                                                                                                    |
| NT\$30,000,000 (incl.) - NT\$50,000,000  | —                                                                                                                                        | —                                                                                                                                        | —                                                                       | —                                                                                                    |
| NT\$50,000,000 (incl.) - NT\$100,000,000 | —                                                                                                                                        | —                                                                                                                                        | Jason C.S. Chang                                                        | Richard H.P. Chang, Bough Lin, Chi-Wen Tsai, Tien Wu, Joseph Tung, Raymond Lo, TS Chen, Jeffrey Chen |
| NT\$100,000,000 and above                | —                                                                                                                                        | —                                                                                                                                        | —                                                                       | Jason C.S. Chang                                                                                     |
| Total                                    | —                                                                                                                                        | —                                                                                                                                        | —                                                                       | —                                                                                                    |

### 3.3.2 Renumeration for Supervisors

The Board of Directors were re-elected during the General Shareholders' Meeting held on June 21, 2018. Three independent directors were appointed to form an audit committee to replace the supervisors on June 22, 2018.

### 3.3.3 Remuneration for General Manager and Vice Presidents

December 31, 2018

Units: Shares in thousands; NT\$ in thousands

| Title                               | Name               | Salary (A)*** |                                | Severance Pay and Pensions (B)** |                                | Bonuses and Allowances (C) |                                | Employee remuneration from profit distribution (D)* |       |                                |       | Total Compensation (A+B+ C+D) as a percentage of net income after tax |                                | Compensation Received from Non-consolidated Affiliates |
|-------------------------------------|--------------------|---------------|--------------------------------|----------------------------------|--------------------------------|----------------------------|--------------------------------|-----------------------------------------------------|-------|--------------------------------|-------|-----------------------------------------------------------------------|--------------------------------|--------------------------------------------------------|
|                                     |                    | ASEH          | From All Consolidated Entities | ASEH                             | From All Consolidated Entities | ASEH                       | From All Consolidated Entities | ASEH                                                |       | From All Consolidated Entities |       | ASEH                                                                  | From All Consolidated Entities |                                                        |
|                                     |                    |               |                                |                                  |                                |                            |                                | Cash                                                | Stock | Cash                           | Stock |                                                                       |                                |                                                        |
| Group CEO                           | Jason C.S. Chang   | 9,160         | 120,829                        | —                                | —                              | —                          | 57,074                         | 45,430                                              | —     | 185,138                        | —     | 0.22%                                                                 | 1.44%                          | None                                                   |
| General Manager                     | Richard H.P. Chang |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Group COO                           | Tien Wu            |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Group CFO                           | Joseph Tung        |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Group Chief of Staff                | David Pan          |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Group CAO                           | Dtuang Wang        |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Vice President and Group Controller | Murphy Kuo         |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Vice President                      | Alan Li            |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Vice President                      | Anne Chang         |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Vice President                      | Peili Shen         |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |
| Vice President                      | Eddie Chang        |               |                                |                                  |                                |                            |                                |                                                     |       |                                |       |                                                                       |                                |                                                        |

\* Please refer to the first footnote on Page19 for details.

\*\* Total severance pay and retirement pensions belong to the contribution of retirement benefit expenses.

\*\*\*The amount of this column does not include the Employee Stock Options Expenses of the Company and all the companies listed in the financial report, which is NT\$ 1,326 thousand and NT\$ 3,880 thousand respectively.

### Range of Compensation

| Remuneration Range of General Manager and Vice Presidents | Names of General Manager and Vice Presidents                                                           |                                              |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------|
|                                                           | ASEH                                                                                                   | From All Consolidated Entities               |
| Less than NT\$2,000,000                                   | Tien Wu, Joseph Tung, David Pan, Dtuang Wang, Murphy Kuo, Alan Li, Anne Chang, Peili Shen, Eddie Chang | —                                            |
| NT\$2,000,000 (incl.) - NT\$5,000,000                     | —                                                                                                      | —                                            |
| NT\$5,000,000 (incl.) - NT\$10,000,000                    | —                                                                                                      | Alan Li, Anne Chang, Peili Shen, Eddie Chang |
| NT\$10,000,000 (incl.) - NT\$15,000,000                   | —                                                                                                      | Dtuang Wang, Murphy Kuo                      |
| NT\$15,000,000 (incl.) - NT\$30,000,000                   | Richard H.P. Chang                                                                                     | David Pan                                    |
| NT\$30,000,000 (incl.) - NT\$50,000,000                   | —                                                                                                      | —                                            |
| NT\$50,000,000 (incl.) - NT\$100,000,000                  | Jason C.S. Chang                                                                                       | Richard H.P. Chang 、 Tien Wu 、 Joseph Tung   |
| NT\$100,000,000 and above                                 | —                                                                                                      | Jason C.S. Chang                             |
| Total                                                     | —                                                                                                      | —                                            |

### 3.3.4 Employees' Remuneration Paid to Management

December 31, 2018  
Unit: NT\$ in thousands

|            | Title                               | Name               | Stock* | Cash*  | Total  | Percentage of net income after tax |
|------------|-------------------------------------|--------------------|--------|--------|--------|------------------------------------|
| Management | Group CEO                           | Jason C.S. Chang   | —      | 45,430 | 45,430 | 0.18%                              |
|            | General Manager                     | Richard H.P. Chang |        |        |        |                                    |
|            | Group COO                           | Tien Wu            |        |        |        |                                    |
|            | Group CFO                           | Joseph Tung        |        |        |        |                                    |
|            | Group Chief of Staff                | David Pan          |        |        |        |                                    |
|            | Group CAO                           | Dtuang Wang        |        |        |        |                                    |
|            | Vice President and Group Controller | Murphy Kuo         |        |        |        |                                    |
|            | Vice President                      | Alan Li            |        |        |        |                                    |
|            | Vice President                      | Anne Chang         |        |        |        |                                    |
|            | Vice President                      | Peili Shen         |        |        |        |                                    |
|            | Vice President                      | Eddie Chang        |        |        |        |                                    |

\*Please refer to the first footnote on Page 19 for details.

### 3.3.5 Comparative Analysis of Percentage of Remuneration for Directors, General Manager, and Vice Presidents to Net Profit After Tax over the Last Two Years, and Explanation of Remuneration Strategies, Remuneration Criteria and Packages, Decision Processes and Correlation Between Strategy and Future Risk

| Percentage of Net Income After Tax \ Year              | 2018  |                       |
|--------------------------------------------------------|-------|-----------------------|
|                                                        | ASEH  | Consolidated Entities |
| Compensation for Directors**                           | 2.46% | 2.46%                 |
| Compensation for General Manager and Vice Presidents** | 0.22% | 1.44%                 |

The salaries of the CEO and General Manager are determined in the Board of Directors. The salaries of the vice presidents are allocated in accordance with industry standards. Checks are conducted annually to ensure that remuneration is competitive. Bonuses are dependent on Company surplus and individual performance. The Company's remuneration to directors is pursuant to the Articles of Incorporation and allocated in accordance with annual gross profit.

\*\* Employee remuneration for 2018 shall amount to NT\$45,430 thousand as determined in the Board of Directors held on March 28, 2019. Remuneration shall be paid in cash. However, the namelist for allocation of employee remuneration was not yet available as of the date of this annual report. Therefore, the calculations are estimated on the basis of the actual allocations of the previous year.

### 3.4 Corporate Governance

#### 3.4.1 Board of Directors:

##### Operation of the Board of Directors

The Company elected the first term of board directors in the promoters' meeting on Feb. 12, 2018. On the same date, the Company convened its first Meeting of the 1st Board of Directors. Since Feb. 12, 2018, to the date of printing of this annual report, the Board of Directors held a total of 13 meetings (A), Attendance was as follows:

| Title                                                  | Name                               | Attendance in Person (B) | By Proxy | Attendance Rate (%) B/A(Note 1) | Remarks                       |
|--------------------------------------------------------|------------------------------------|--------------------------|----------|---------------------------------|-------------------------------|
| Director (Representative) (A.S.E. Enterprises Limited) | Jason C.S. Chang (Chairman)        | 13                       | 0        | 100%                            | Re-elected                    |
|                                                        | Richard H.P. Chang (Vice Chairman) | 12                       | 1        | 92%                             | Re-elected (Note 2)           |
|                                                        | Bough Lin                          | 12                       | 0        | 92%                             | Re-elected                    |
|                                                        | Chi-Wen Tsai                       | 12                       | 1        | 92%                             | Re-elected                    |
|                                                        | Tien Wu                            | 11                       | 0        | 85%                             | Re-elected                    |
|                                                        | Joseph Tung                        | 13                       | 0        | 100%                            | Re-elected                    |
|                                                        | Raymond Lo                         | 13                       | 0        | 100%                            | Re-elected                    |
|                                                        | TS Chen                            | 13                       | 0        | 100%                            | Re-elected                    |
|                                                        | Jeffrey Chen                       | 10                       | 2        | 77%                             | Re-elected                    |
| Director                                               | Rutherford Chang                   | 9                        | 2        | 69%                             | Re-elected                    |
| Independent director                                   | Sheng-Fu You                       | 10                       | 0        | 100%                            | Newly appointed (Note 3)      |
|                                                        | Ta-Lin Hsu                         | 6                        | 4        | 60%                             | Newly appointed (Note 3)      |
|                                                        | Mei-Yueh Ho                        | 10                       | 0        | 100%                            | Newly appointed (Note 3)      |
| Director                                               | Freddie Liu                        | 3                        | 0        | 100%                            | Previously appointed (Note 4) |
| Supervisor                                             | Alen Cheng                         | 3                        | 0        | 100%                            | Previously appointed (Note 4) |
|                                                        | Yuan-Chuan Fong                    | 2                        | 0        | 67%                             | Previously appointed (Note 4) |
|                                                        | Fang-Yin Chen                      | 1                        | 0        | 33%                             | Previously appointed (Note 4) |

Note 1. The attendance rate is calculated based on the times of Board of Directors' Meetings and the actual attendances within the director's term of office.

Note 2. After the re-election of the directors for the second term, the director had been changed from an individual to juridical director (representative).

Note 3. The new director assumed the position on Jun. 22, 2018. As of the date of this annual report, the director had ten Board of Directors Meetings to attend.

Note 4. For the director/supervisor prior to re-election on June 21, 2018 who are eligible to attend three times of Board of Directors' Meetings during the period of April 30, 2018 and June 21, 2018.

Other Disclosures:

1. If any of the following circumstances occurred during the operation of the Board of Directors, the meeting dates, and proposal details, opinions of all independent directors, and the Company's responses to such opinions should be specified:
  - (1) Items listed in Article 14-3 of the Securities and Exchange Act: No comments were raised from any independent director, therefore no further actions were taken.
  - (2) Written or otherwise recorded resolutions in which an independent director had a dissenting opinion or qualified opinion not included in the aforementioned item :None.
  - (3) At least one independent director attended each Board of Directors' Meeting.
2. Status of the Recusals of Directors due to conflicts of interests, the name of the directors, proposal details, the reasons for recusal, and the voting result should be specified.

| Meeting Dates                                              | Proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Voting Result                                                                                                                                                                                 | The Company's Responses to the Opinions of Directors |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| The 2nd Meeting of the 1st Board of Directors (2018.04.30) | <p>To nominate the CEO, General Manager, COO, CFO, Group Controller, and Internal Audit Officer of the Company</p> <p>Directors' Recusals due to conflicts of interest:<br/>Summary of Director Joseph Tung's statement: I, Joseph Tung, and directors Jason C.S. Chang, Richard H.P. Chang, and Tien Wu are candidates in this election. Therefore, the content of this proposal involves personal interest. To avoid a conflict of interest, I, Joseph Tung, and directors Jason C.S. Chang, Richard H.P. Chang, and Tien Wu shall refrain from participating in any discussion or votings. Will the remaining attending directors please commence discussion.</p> | The attending directors (excl. directors absent due to conflict of interest) did not voice any objections upon inquiry by acting chairman Jeffrey Chen. Therefore, the proposal was approved. | Not applicable                                       |
|                                                            | <p>To lift the non-compete clause on the Company's general manager</p> <p>Directors' Recusals due to conflicts of interest:<br/>Summary of Director Richard H.P. Chang's statement: This proposal recommends the lifting of the non-compete obligations of myself and other parties of interest. To avoid a conflict of interest, I shall refrain from participating in any discussion or votings. Will the remaining attending directors please commence discussion.</p>                                                                                                                                                                                            | The attending directors (excl. directors absent due to conflict of interest) did not voice any objections upon inquiry by the chairman. Therefore, the proposal was approved.                 | Not applicable                                       |



| Meeting Dates                                              | Proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Voting Result                                                                                                                                                                                      | The Company's Responses to the Opinions of Directors |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| The 2nd Meeting of the 2nd Board of Directors (2018.07.13) | <p>To nominate the members of the 2nd Compensation Committee</p> <p>Directors' Recusals due to conflicts of interest:<br/>Summary of Director Sheng-Fu You's statement: Independent Director Ta-Lin Hsu and I are candidates for this position. Therefore, the content of this proposal involves personal interest. To avoid a conflict of interest, both Acting Independent Director Ta-Lin Hsu and I shall refrain from participating in any discussion or votings. Will the remaining attending directors please commence discussion.</p>                                                                                                                                                                                                                                                                                                                                            | The attending directors did not voice any objections upon inquiry by the chairman. Therefore, the proposal was approved.                                                                           | Not applicable                                       |
| The 4th Meeting of the 2nd Board of Directors (2018.09.26) | <p>To resolve the issuance units of the 1st issuance of employee stock option in 2018 and the namelist of employees granted.</p> <p>Directors' recusals due to conflicts of interest:<br/>Summary of Director Joseph Tung's statement: I, Joseph Tung, and Directors Jason C.S. Chang, Richard H.P. Chang, Bough Lin, Chi-Wen Tsai, Tien Wu, Raymond Lo, TS Chen, Jeffrey Chen, and Rutherford Chang are granted employees of 1st issuance of employee stock option in 2018. Therefore, the content of this proposal involves personal interest. To avoid a conflict of interest, I, Joseph Tung, and Directors Jason C.S. Chang, Richard H.P. Chang, Bough Lin, Chi-Wen Tsai, Tien Wu, Raymond Lo, TS Chen, Jeffrey Chen, and Rutherford Chang shall refrain from participating in any discussion or decisions. Will the remaining attending directors please commence discussion.</p> | The attending directors (excl. directors absent due to conflict of interest) did not voice any objections upon inquiry by the acting chairman, Sheng-Fu You. Therefore, the proposal was approved. | Not applicable                                       |

| Meeting Dates                                              | Proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Voting Result                                                                                                                                                                                      | The Company's Responses to the Opinions of Directors |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| The 7th Meeting of the 2nd Board of Directors (2018.11.19) | <p>To resolve the second issuance units of employee stock option in 2018 and the namelist of employees granted.</p> <p>Directors' recusals due to conflicts of interest:</p> <p>Summary of Director Joseph Tung - As I, Joseph Tung, Director Jason C.S. Chang, Director Richard H.P. Chang, Director Bough Lin, Director Chi-Wen Tsai, Director Tien Wu, Director Raymond Lo, and Director TS Chen all are granted employees of 2nd issuance of employee stock option in 2018, personal interest of the agenda of the meeting of this case are involved. To avoid conflicts of interest, I, Joseph Tung, Director Jason C.S. Chang, Director Richard H.P. Chang, Director Bough Lin, Director Chi-Wen Tsai, Director Tien Wu, Director Raymond Lo, Director TS Chen are recusing from the discussion and resolution of this agenda item and ask the remaining attending directors to discuss and resolve this item.</p> | The attending directors (excl. directors absent due to conflict of interest) did not voice any objections upon inquiry by the acting chairman, Sheng-Fu You. Therefore, the proposal was approved. | Not applicable                                       |

3. Measures Taken to Strengthen the Effectiveness of the Board of Directors within the Current Year and in Recent Years (e.g. establishment of audit committee, increased corporate transparency, etc.) and their Evaluations:

For the purpose of developing monitoring functions of the Board of Directors and strengthening management mechanism, the Remuneration Committee was established on the same date of the Company establishment (April 30, 2018), and an Audit Committee was established on June 22, 2018, to enhance the effectiveness of the Board of Directors.

To fulfill corporate governance, increase the effectiveness of the Board of Directors, and set performance goals to strengthen the performance of the Board of Directors, the Company established its Rules of Performance Evaluation of the Board of Directors and commenced annual performance evaluations in 2018.

**3.4.2 Audit Committee and Supervisor Participation in Board of Directors:**

To establish a proactive system of governance, develop a robust oversight capability, and enhance management performance, the Audit Committee was established on June 22, 2018 pursuant to Article 14-4 of the Securities and Exchange Act. At present, the Audit Committee consist of three members who are all independent Directors of the Company. All members should elect a convener and meeting chairman from themselves and represent the Committee externally.

## 1. Audit Committee

The Committee has held six meetings (A) between June 22, 2018 and the date of this annual report of this annual report. The attendance status of the independent directors is as follows:

| Title                | Name         | Attendance in Person (B) | By Proxy | Attendance Rate (%) (B/A)* | Remarks |
|----------------------|--------------|--------------------------|----------|----------------------------|---------|
| Independent director | Sheng-Fu You | 6                        | 0        | 100%                       |         |
|                      | Ta-Lin Hsu   | 3                        | 3        | 50%                        |         |
|                      | Mei-Yueh Ho  | 5                        | 1        | 83%                        |         |

\*The attendance rate is calculated based on the times of attendance of Audit Committee meetings and the times of meetings held during the term in office.

### Other Disclosures:

1. If any of the following circumstances occurred during the operation of the Audit Committee, the date, session number, proposal details, resolutions made by the Audit Committee, and the Company's responses to the opinions of the Audit Committee should be specified:

- (1) Items listed in Article 14-5 of the Securities and Exchange Act: None.
- (2) Resolutions approved by at least two-thirds of the Board of Directors but yet to be reviewed by the Audit Committee that are not included in the aforementioned item. :None.

2. Independent director recusals due to proposals involving matters with conflict of interest. The name of the independent directors, proposal details, the reason for recusal, and the voting result should be specified:

| Meeting Dates                                              | Proposal                                                      | Names of independent directors | Reason for absence                                                                                                                                       | Voting results                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------|---------------------------------------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The 2nd Meeting of the 2nd Board of Directors (2018.07.13) | To nominate the candidates for the 2nd Compensation Committee | Sheng-Fu You<br>Ta-Lin Hsu     | Independent Directors Sheng-Fu You and Ta-Lin Hsu were nominees for the Compensation Committee. The content of this proposal involves personal interest. | Independent Directors Sheng-Fu You and Ta-Lin Hsu refrained from participating in the decision process. The attending directors (excl. directors absent due to conflict of interest) did not voice any objections upon inquiry by the chairman. Therefore, the proposal was approved. |

3. Independent director communication with Internal Audit Officer and CPAs (which should include the material items, measures, and results of the audits on the corporate finance and/or operations, etc.)

- (1) The Company's internal audit department submits audit reports, responses to identified deficiencies, and tracking summaries via e-mail to the independent directors for review on a monthly basis. The Internal Audit Officer submits a quarterly audit report to the independent directors to discuss audit content at meetings. An internal audit report is submitted to the Board of Directors on a quarterly basis. In addition, the Internal Audit Officer will immediately report to the independent directors any material matters. No such material matters were presented between June 22, 2018 and the date of this annual report. At present, the independent directors and the Internal Audit Officer have established an excellent channel of communication.
- (2) Each quarter the Company's CPA reports to Independent Directors in an independent communication meeting or other meetings about the findings of review or audits of the financial reports of the same quarter and communication items under applicable laws and regulations. In addition, the CPA reports special matters to the independent directors when they occur. No such reports were presented between June 22, 2018 and the date of this annual

report. At present, the independent directors and CPA have established an excellent channel of communication.

4. Resolutions of Audit Committee's for the material proposals and the status of Company's treatment of feedback from the Audit Committee:

| Audit Committee Date and Term                           | Proposal                                                                                                                                                                                                                                                  | Resolution of the Audit Committee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | The Company's treatment of feedback from the Audit Committee                                                                                                                |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The 2nd meeting of the 1st Audit Committee (2018.08.09) | To plan for the First Employee Stock Option Plan of the Company                                                                                                                                                                                           | After the attendees left the meeting, the chairman inquired with the attending Independent Directors and the resolution of this item was passed unanimously.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | The item was submitted to the Board of Directors for resolution. The chairman inquired with the attending Directors and the resolution of this item was passed unanimously. |
| The 3rd meeting of the 1st Audit Committee (2018.11.06) | To plan for negotiating with the Securities and Futures Investors Protection Center (hereinafter referred to as "SFIPC") in order to stay the litigation against SFIPC's proposal of dismissing the position of Mr. Tien Wu as a director of the Company. | Regarding this proposal, after the attendees left the meeting, the chairman inquired with the attending independent directors and the resolution of this item was passed unanimously. The plan is that, before the conviction of insider trading against Director Tien Wu is affirmed by the supreme court, the Board of Directors authorizes the Chairman of the Company and/or his appointed personnel and lawyers to negotiate with SFIPC to reach a consent to stay the legal proceeding of the removal of Tien's position as a Board Director. If the consent cannot be reached or if the duration of the stay expires, by law the defense and required appeal procedures still need to carry on. | The item was submitted to the Board of Directors for resolution. The chairman inquired with the attending Directors and the resolution of this item was passed unanimously. |
| The 4th meeting of the 1st Audit Committee (2018.12.06) | To plan for hiring independent experts to provide reasonable opinions about cash consideration in the share transfer agreement that the Company plans to sign with King Yuan Electronics Corp. (hereinafter referred to as "King Yuan Electronics")       | After the attendees left the meeting, the chairman inquired with the attending Independent Directors and the resolution of this item was passed unanimously.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | This proposal was not submitted to the Board of Directors for resolution.                                                                                                   |

| Audit Committee Date and Term                           | Proposal                                                                                                                           | Resolution of the Audit Committee                                                                                                                            | The Company's treatment of feedback from the Audit Committee                                                                                                                |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The 5th meeting of the 1st Audit Committee (2018.12.19) | To plan for the merger with USI Global Inc., the Company's subsidiary which the Company withholds 100% of the subsidiary's shares. | After the attendees left the meeting, the chairman inquired with the attending Independent Directors and the resolution of this item was passed unanimously. | The item was submitted to the Board of Directors for resolution. The chairman inquired with the attending Directors and the resolution of this item was passed unanimously. |

## 2. Supervisor participation in Board of Directors

The company held a Extraordinary General Shareholders' Meeting on Jun. 21, 2018 to conduct complete re-election of board directors. The three independent directors resumed their position on Jun. 22, 2018 and formed the Audit Committee to replace the Supervisors. The Board of Directors has held three meetings (A) between April 30, 2018 and June 21, 2018. The attendance status of the Supervisors was as follows:

| Title      | Name            | Attendance in Person (B) | Attendance Rate (%) (B/A)* | Remarks                                             |
|------------|-----------------|--------------------------|----------------------------|-----------------------------------------------------|
| Supervisor | Alan Cheng      | 3                        | 100%                       | Dismissed on 21 June 2018 for committee re-election |
|            | Yuan-Chuan Feng | 2                        | 67%                        |                                                     |
|            | Fang-Ying Chen  | 1                        | 33%                        |                                                     |

\*The attendance rate is calculated based on the times of attendance of Board of Directors' Meetings and the times of meetings held during the term in office.

**3.4.3 Corporate Governance Implementation Status and Differences from the Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies:**

| Assessment Item                                                                                                                                                                                       | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                   | Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                       | Yes                   | No | Explanation                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                     |
| 1. Does the Company establish and disclose its corporate governance practices in accordance with the Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies?                    | V                     |    | In 2018, the Company referred to Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and drew up Corporate Governance Code Practice, which has been approved by the Board of Directors for publication and disclosed on the Company's website: <a href="http://ir.aseglobal.com/c/ir_doc.php">http://ir.aseglobal.com/c/ir_doc.php</a> . | No material differences                                                                                             |
| 2. Shareholding Structure & Shareholders' Rights                                                                                                                                                      |                       |    |                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                     |
| (1) Does the Company have Internal Operation Procedures for handling shareholders' suggestions, concerns, disputes, and litigation matters? If so, has these procedures been implemented accordingly? | V                     |    | The Company has appointed investor relations, public relations, and legal affairs departments to dedicate to all matters regarding stocks.                                                                                                                                                                                                                        | No material differences                                                                                             |
| (2) Does the Company possess a list of major shareholders and beneficial owners of these major shareholders?                                                                                          | V                     |    | The Company maintains an updated list of major shareholders by the Shareholdings Change Registration Form which is filed by directors and shareholders who own 10% or more of the company stocks on a monthly basis. The Company also maintains effective communication channel with its principal shareholders to keep track of its ultimate owners.             | No material differences                                                                                             |
| (3) Has the Company built and implemented a risk control system and firewall between the Company and its affiliates?                                                                                  | V                     |    | The Company implements control measures through the internal control system and relevant laws and regulations. The Audit Department conducts periodical audits as oversight.                                                                                                                                                                                      | No material differences                                                                                             |

| Assessment Item                                                                                                                                               | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                               | Yes                   | No | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                     |
| (4) Has the Company established internal rules prohibiting insider trading on undisclosed information?                                                        | V                     |    | In 2018, the Company drew up the Operating Procedures for the Prevention of Insider Trading to avoid any misconduct of insider trading out of not knowing relevant regulations and guidelines and to minimize any predispositions to unintentional mistakes or deliberate wrongdoings of insiders so that the fairness in the stock exchange markets can be fostered and rights and benefits of the investors and the public protected. For details, please refer to the Company's website: <a href="http://ir.aseglobal.com/c/ir_doc.php">http://ir.aseglobal.com/c/ir_doc.php</a> .                                                                                                                                                                                                        | No material differences                                                                                             |
| 3. Composition and Responsibilities of the Board of Directors                                                                                                 |                       |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                     |
| (1) Has the Board of Directors established a diversity policy for the composition of its members and has it been implemented accordingly?                     | V                     |    | The Company established the Company's Board of Directors Diversification Policy in the Code of Practice for Corporate Governance and implement pursuant to the policy.<br>ASE Technology Holding's board of directors ("Board") is composed of 13 directors, including 3 independent directors (23% of Board members) with 1 woman (8% of Board members), and 4 directors are also employees (31% of Board members). All directors currently serve on the Board less than 1 year. The expertise of the directors covers industrial engineering, electronic engineering, mechanical engineering, computer engineering, physics, finance, economics, accounting, business management, and psychology. This range of expertise shows the full implementation of the Company's Diversity Policy. | No material differences                                                                                             |
| (2) Other than the Compensation Committee and Audit Committee which are required by law, has the Company voluntarily established other functional committees? | V                     |    | The Company established the Audit Committee pursuant to relevant laws. An independent director specializing in accounting or financial management is appointed by the Board of Directors as a committee member of the Audit Committee pursuant to the Sarbanes-Oxley Act defined in Article 10A-3 of the Securities Exchange Act of 1934 and the listing rules announced by the                                                                                                                                                                                                                                                                                                                                                                                                              | No material differences                                                                                             |

| Assessment Item                                                                                                                                                | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                | Yes                   | No | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                     |
| (3) Has the Company established a method of evaluating the performance of its Board of Directors and has the performance evaluation been implemented annually? | V                     |    | <p>TWSE.</p> <p>The Board of Directors established the Compensation Committee pursuant to relevant laws. The Compensation Committee currently has three members, two of whom are independent directors.</p> <p>The Company has set the remuneration for the Directors. The company adheres to Article 23 of the Company's corporation by-laws, where in case of profits, the Company shall appropriate up to 0.75% of its annual profits to remunerate the directors. In addition, in consideration of the Company's overall operating performance and the future industry development trends, the Company referred to Sample Template of "Self-Evaluation or Peer Evaluation of the Board of Directors" and drew up assessment measures of the performance of the Board of Directors in 2018, which has been passed by the Board of Directors for publication and disclosed on the Company's website. By the end of the financial year 2018, the Company conducted its first performance assessment based on the assessment measures that the Company drew up. The assessment result has not only been reported to the Chairman and Directors but also submitted to the Compensation Committee as a reference for director performance assessment and remuneration.</p> | No material differences                                                                                             |
| (4) Does the Company regularly evaluate the independence of its CPAs?                                                                                          | V                     |    | <p>The Audit Committee acquires a CPA declaration annually and evaluates the independence of the CPA before submitting the evaluation results to the Board of Directors.</p> <p>1. The assessment criteria are as follows:<br/> (1) The CPA is not a related party to the Company or its directors.<br/> (2) Pursuant to the Sarbanes-Oxley Act of the United States, the CPA's firm must obtain prior approval from the Audit Committee before the annual audit and other cases are appointed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No material differences                                                                                             |



| Assessment Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes                   | No | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |    | <p>(3) Pursuant to the Sarbanes-Oxley Act of the United States, the CPA reports to the Audit Committee on a quarterly basis to report compliance to independence and findings of audits or review.</p> <p>(4) The Company rotates CPAs pursuant to the Code of Practice for Corporate Governance.</p> <p>2. The evaluation results are as follows:</p> <p>(1) The independence of the CPA is compliant with the regulations of the U.S. SEC, PCAOB, Certified Public Accountant Act, the CPA Code of Professional Ethics and other relevant regulations.</p> <p>(2) The Company has not appointed the same CPA for five successive years.</p>                                                                                                                                                                                                                                                                                                                                |                                                                                                                     |
| 4. Has the Company established a dedicated (or tasked) corporate governance unit or personnel to be in charge of matters involving corporate governance (including but not limited to providing information required by directors and supervisors related to business operations, handling matters relating to Board of Directors' meetings and General Shareholders' Meetings pursuant to the laws, handling corporate registration and amendment registration, and recording minutes of the Board of Directors' meetings and General Shareholders' Meetings)? | V                     |    | <p>The chief corporate governance officer will be appointed in 2019 pursuant to the relevant regulations as the most senior executive for corporate governance matters and approved by the Board. The corporate governance persons are in charge of corporate governance affairs as the following:</p> <ol style="list-style-type: none"> <li>1. Handling of matters relating to board of directors meetings and shareholders meetings in compliance with law;</li> <li>2. Preparation of minutes of the board of directors meetings and shareholders meetings;</li> <li>3. Assistance in onboarding and continuing education of the directors and supervisors;</li> <li>4. Provision of information required for performance of duties by the directors and supervisors;</li> <li>5. Assistance in the directors' and supervisors' compliance of law; and</li> <li>6. Other matters described or established in the articles of incorporation or under contract.</li> </ol> | No material differences                                                                                             |

| Assessment Item                                                                                                                                                                                                                                                                                                                                  | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                  | Yes                   | No | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                     |
| 5. Has the Company established a means of communication with its stakeholders (including but not limited to shareholders, employees, customers, and suppliers) or created a stakeholders section on the Company's website? Does the Company respond appropriately to stakeholders' questions on major issues of corporate social responsibility? | V                     |    | The Company instructs related departments to handle communication with stakeholders such as shareholders, clients, and suppliers. Corporate union and the General Manager's mailbox are established to serve as channels of communication with employees.<br>The Company has a Stakeholder Engagement Section on the Company website that serves as a channel of communication for stakeholders to express their opinions and for the Company to identify issues of concern and make appropriate responses. Stakeholders communication information are disclosed in the annual CSR Report and on the Company website. Please refer to <a href="http://www.aseglobal.com/en/csr_stakeholder_engagement.html">http://www.aseglobal.com/en/csr_stakeholder_engagement.html</a> . | No material differences                                                                                             |
| 6. Has the Company appointed a professional registrar for its General Shareholders' Meetings?                                                                                                                                                                                                                                                    | V                     |    | The Company has appointed the Stock Agency Department, President Securities Corp., to handle matters related to General Shareholders' Meetings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No material differences                                                                                             |
| 7. Information Transparency<br>(1) Has the Company established a corporate website to disclose information regarding its financial, business, and corporate governance status?                                                                                                                                                                   | V                     |    | The Company has established a website and has instructed designated departments to disclose and update the information of the finances and the corporate governance information of the Company, Please refer to the Company Website <a href="http://www.aseglobal.com">http://www.aseglobal.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No material differences                                                                                             |
| (2) Does the Company use other information disclosure channels (e.g., maintaining an English website, designating staff to handle information collection and disclosure, appointing spokespersons, webcasting investor conferences etc.)?                                                                                                        | V                     |    | The Company has established a website both in Chinese and English. It has dedicated personnel for the collection and disclosure of Company information. It has a spokesperson and secondary spokesperson system, as well as a designated contacts for responding to shareholders' opinions. Relevant information is available on the company website (the URL is same as above). A dedicated department has been assigned to submit information to                                                                                                                                                                                                                                                                                                                            | No material differences                                                                                             |

| Assessment Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                   | No | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                       |    | the Market Observation Post System, including all regular and ad hoc financial information, business information, and announcing material information in accordance with related regulations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                     |
| 8. Has the Company disclosed other information to facilitate a better understanding of its corporate governance practices? (including but not limited to employee rights, employee care, investor relations, supplier relations, stakeholder rights, continuing education of directors and supervisors, implementation of risk management policies and criteria for risk evaluation, implementation of customer relation policies, and the purchase of liability insurance for directors and supervisors) | V                     |    | (1) Employee benefits and employee care: Please refer to the CSR Report of the subsidiaries separately.<br>(2) Investor relations, supplier relations, and stakeholder rights: Please refer to the Investor Relations and Stakeholder Engagement sections of the Company website.<br>(3) The continuing education status for directors and officers in 2018 is presented in Table 1 and Table 2 below.<br>(4) Implementation of risk management policies and criteria for risk evaluation: Please refer to the "Risk Management" section of this annual report and the subsidiaries' CSR Report.<br>(5) Implementation of customer policies: Please refer to the "Market and Sales Overview" section of this annual report.<br>(6) Company procurement of liability insurance for directors: The Company has procured liability insurance for its directors (to the amount of NT\$1.54 billion in 2018). | No material differences                                                                                             |
| 9. Company improvements in corporate governance based on the assessment items stipulated in the Corporate Governance Evaluation Results issued in the most recent year by the Corporate Governance Center of the TWSE, and priority measures for items requiring further improvement.<br>In 2018, ASE Technology Holding Co., Ltd. was founded and it was not included in the corporate governance evaluation in the most recent year (2017). Therefore, this item is not applicable.                     |                       |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                     |

Table 1: Continuing education of directors in the most recent year and as of the date of this annual report

| Title                                 | Name               | Training Date |            | Hosted by                               | Training Title                                                                                        | Hours | Regulatory compliance |
|---------------------------------------|--------------------|---------------|------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------|-------|-----------------------|
|                                       |                    | from          | to         |                                         |                                                                                                       |       |                       |
| Director (representative) and officer | Jason C.S.Chang    | 2018/11/06    | 2018/11/06 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                                              | 3     | Yes                   |
|                                       |                    | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                                    | 3     | Yes                   |
| Director (representative) and officer | Richard H.P. Chang | 2018/11/06    | 2018/11/06 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                                              | 3     | Yes                   |
|                                       |                    | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                                    | 3     | Yes                   |
| Director (representative)             | Bough Lin          | 2018/12/20    | 2018/12/20 | Securities and Futures Institute        | Impacts of the US-China Trade War on the Risks of Taiwan-funded Enterprises and the Coping Strategies | 3     | Yes                   |
|                                       |                    | 2018/10/25    | 2018/10/25 | Securities and Futures Institute        | IP Strategies of R&D and Application of Tax Credits for Corporate R&D Expenditures                    | 3     | Yes                   |
| Director (representative)             | Chi-Wen Tsai       | 2018/12/20    | 2018/12/20 | Securities and Futures Institute        | Impacts of the US-China Trade War on the Risks of Taiwan-funded Enterprises and the Coping Strategies | 3     | Yes                   |
|                                       |                    | 2018/11/06    | 2018/11/06 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                                              | 3     | Yes                   |
|                                       |                    | 2018/10/25    | 2018/10/25 | Securities and Futures Institute        | IP Strategies of R&D and Application of Tax Credits for Corporate R&D Expenditures                    | 3     | Yes                   |
|                                       |                    | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                                    | 3     | Yes                   |
| Director (representative) and officer | Tien Wu            | 2018/12/04    | 2018/12/04 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                                              | 3     | Yes                   |
|                                       |                    | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                                    | 3     | Yes                   |

| Title                                       | Name             | Training Date |            | Hosted by                               | Training Title                                                                     | Hours | Regulatory compliance |
|---------------------------------------------|------------------|---------------|------------|-----------------------------------------|------------------------------------------------------------------------------------|-------|-----------------------|
|                                             |                  | from          | to         |                                         |                                                                                    |       |                       |
| Director<br>(representative)<br>and officer | Joseph Tung      | 2018/11/06    | 2018/11/06 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                           | 3     | Yes                   |
|                                             |                  | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                 | 3     | Yes                   |
| Director<br>(representative)                | Raymond Lo       | 2018/12/04    | 2018/12/04 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                           | 3     | Yes                   |
|                                             |                  | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                 | 3     | Yes                   |
| Director<br>(representative)                | TS Chen          | 2018/11/06    | 2018/11/06 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                           | 3     | Yes                   |
|                                             |                  | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                 | 3     | Yes                   |
| Director<br>(representative)                | Jeffrey Chen     | 2018/11/06    | 2018/11/06 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                           | 3     | Yes                   |
|                                             |                  | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                 | 3     | Yes                   |
| Director                                    | Rutherford Chang | 2018/11/06    | 2018/11/06 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                           | 3     | Yes                   |
|                                             |                  | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                 | 3     | Yes                   |
| Independent Director                        | Sheng-Fu You     | 2018/11/06    | 2018/11/06 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                           | 3     | Yes                   |
|                                             |                  | 2018/09/26    | 2018/09/26 | Taiwan Corporate Governance Association | The Amendment of the Company Act and Case Analysis                                 | 3     | Yes                   |
|                                             |                  | 2018/05/02    | 2018/05/02 | Taiwan Corporate Governance Association | How to Successfully Negotiate and Discuss Investment Mergers: A Case Study         | 3     | Yes                   |
| Independent Director                        | Ta-Lin Hsu       | 2018/12/04    | 2018/12/04 | Taiwan Corporate Governance Association | Trends and Challenges of Information Security Governance                           | 3     | Yes                   |
|                                             |                  | 2018/11/19    | 2018/11/19 | Taiwan Corporate Governance Association | Practices of Corporate Governance Evaluation and Corporate Social Responsibilities | 3     | Yes                   |

| Title                | Name        | Training Date |            | Hosted by                        | Training Title                                                                                                                             | Hours | Regulatory compliance |
|----------------------|-------------|---------------|------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------|
|                      |             | from          | to         |                                  |                                                                                                                                            |       |                       |
| Independent Director | Mei-Yueh Ho | 2018/10/03    | 2018/10/03 | Securities and Futures Institute | Advanced Seminar on Practices of Board Directors and Supervisors - How a Supervisor from a non-F&A Background Reviews Financial Statements | 3     | Yes                   |
|                      |             | 2018/03/21    | 2018/03/21 | Corporate Operation Association  | Latest Amendment of the Company Act                                                                                                        | 3     | Yes                   |

Table 2: Continuing education of officers in the most recent year and as of the Date of this Annual Report

| Title                               | Name       | Training Date |            | Hosted by                                      | Training Title                                                                                                       | Hours | Regulatory compliance |
|-------------------------------------|------------|---------------|------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------|-----------------------|
|                                     |            | from          | to         |                                                |                                                                                                                      |       |                       |
| Vice President and Group Controller | Murphy Kuo | 2018/09/06    | 2018/09/07 | Accounting Research and Development Foundation | Continuing education course for principal accounting officers of issuers, securities firms, and securities exchanges | 12    | Yes                   |

### 3.4.4 Composition, Responsibilities, and Operation of the Compensation Committee:

To ensure corporate governance and have a comprehensive and robust compensation system for the directors and officers of the Company, the Company set up the Compensation Committee in accordance with Article 14-6 of Securities and Exchange Act and Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Stock Exchange or Traded Over the Counter on Apr. 30, 2018. The Compensation Committee consists of three members who are assigned by the Board of Director upon resolution; There was no independent directors elected on the establishment of the Company, therefore there was no independent directors to be appointed as a member of the 1st compensation committee on Apr. 30, 2018. On Jun. 21, 2018, a Extraordinary General Shareholders' Meeting was convened to have full re-election of directors, and officially appointed the independent directors to be the members of the second term of the Compensation Committee on Jul. 13, 2018, then there were independent directors to take part in the committee. As stipulated by the regulation, the Compensation Committee must consist of at least one independent director of the Company (there are two independent directors of the Company being the Committee members), and all members should elect a convenor and meeting chairman from members of independent directors and represent the Committee externally. The Compensation Committee is obliged to exercise the due care of a good administrator and have the loyalty in conducting the following functional authorities:

- Establish and regularly review policies, systems, standards, and structures concerning performance evaluations and compensation for directors and officers; and
- Regularly assess and set the remuneration of directors and managers

Current Members of the Compensation Committee:

| Title                | Criteria      | A t least 5 years of work experience and meet one of the following professional qualifications requirements                                                                                                            |                                                                                                                                                                                                                                                 |                                                                                                                                     | Qualification regarding the independence criteria* |   |   |   |   |   |   |   | Number of other public companies Serving as a Compensation Committee Member | Remarks |
|----------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---|---|---|---|---|---|---|-----------------------------------------------------------------------------|---------|
|                      |               | An instructor or higher in a department of commerce, law, finance, accounting, or other academic department related to the business needs of the Company in a public or private junior college, college, or university | A judge, public prosecutor, attorney, certified public accountant, or other professional or technical specialist who has passed a national examination and been awarded a certificate in a profession necessary for the business of the Company | Have work experience in the area of commerce, law, finance, or accounting, or other field necessary for the business of the Company | 1                                                  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |                                                                             |         |
| Independent Director | Sheng-Fu You  | V                                                                                                                                                                                                                      | V                                                                                                                                                                                                                                               | V                                                                                                                                   | V                                                  | V | V | V | V | V | V | V | 1                                                                           |         |
| Independent Director | Ta-Lin Hsu    |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   | V                                                  | V | V | V | V | V | V | V | 1                                                                           |         |
| Other                | Hsiao-Ying Gu |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 | V                                                                                                                                   | V                                                  | V | V | V | V | V | V | V | 1                                                                           |         |

\* Please check in the appropriate corresponding boxes if the Compensation Committee members meet any of the following conditions in the two years before their elections and during their term of office.

- (1) Not an employee of the Company or any of its affiliates;
- (2) Not a director or supervisor of the Company or any of its affiliates. The same does not apply, however, in cases where the person is an independent director of the Company, its parent company, or any subsidiary, as appointed in accordance with the laws of Taiwan or with the laws of the country of the parent company or subsidiary;
- (3) Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of one percent or more of the total number of issued shares of the Company or ranking as one of its top ten shareholders;
- (4) Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the above persons in the preceding three subparagraphs;
- (5) Not a director, supervisor, or employee of an institutional shareholder that directly holds five percent or more of the total number of issued shares of the Company or ranking as one of its top five shareholders;
- (6) Not a director, supervisor, officer, or shareholder holding five percent or more of the shares of a specified company or institution that has

a financial or business relationship with the Company;

(7) Not a professional individual who, or an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that provides commercial, legal, financial, accounting services or consultation to the Company or to any affiliate of the Company, or a spouse thereof;

(8) Not been a person of any conditions defined in Article 30 of the Company Law.

### Operations of the Compensation Committee

Members' tenures are from July 13, 2018 to June 21, 2021. The Compensation Committee has held 3 meetings (A) as of the date of this annual report. Committee members' attendance is as follows:

| Position | Title                | Name          | Attendance in Person<br>(B) | By Proxy | Attendance Rate (%)<br>(B/A)* | Remarks      |
|----------|----------------------|---------------|-----------------------------|----------|-------------------------------|--------------|
| Convener | Independent Director | Sheng-Fu You  | 3                           | 0        | 100%                          | Re-elected** |
| Member   | Independent Director | Ta-Lin Hsu    | 1                           | 1        | 33%                           | Re-elected** |
| Member   | Other                | Hsiao-Ying Gu | 3                           | 0        | 100%                          | Re-elected** |

\* The actual attendance rate is calculated based on the number of meetings held during tenure and actual attendance.

\*\* The three Committee members were reappointed as the Committee members on Jul. 13, 2018 with the tenure same to that of the current term.

Other required disclosure:

1. In case where the Board of Director decides not to take on or modify recommendations of the Compensation Committee, the Board of Director shall specify the date, term number, content of proposal and resolution of the item of the Board of Director Meeting where the above decision is made, and how the Company handles the feedback from the Compensation Committee (for instance, if the remunerations resolved by the Board of Directors is better than those recommended by the Compensation Committee, the Board of Director is obliged to specify the difference and rationales herein): None.
2. If any members object or hold back the recommendation resolved by the Compensation Committee, and have records or written statements, the Compensation Committee date, term number, content of proposal, opinions of all members and how they handled the member's objection, shall be specified herein: None.
3. The Company disclosed the Compensation Committee's proposal and resolutions and the Company's actions in response to the opinions of the members:



| Date and Terms of Remuneration Committee                       | Proposal                                                                                                                                                                                                                                            | Compensation Committee Resolution                                                | The Company's Actions in Response to the Opinions of the Compensation Committee |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| The 1st meeting of the 1st Remuneration Committee (2018.06.13) | The Committee has proposed to appoint the US branch, Willis Towers Watson, to advise on matters relating to the exercise of its powers.                                                                                                             | The Chairman consulted all present members, and the proposal passed unanimously. | No comments were made, therefore no further action was taken.                   |
|                                                                | Proposed to establish the "Clawback Policy."                                                                                                                                                                                                        |                                                                                  |                                                                                 |
|                                                                | Proposed to establish the "Stock Ownership Guidelines."                                                                                                                                                                                             |                                                                                  |                                                                                 |
| The 2nd meeting of the 1st Remuneration Committee (2018.09.17) | Please review the information regarding the subsidiary ASE's submission of the remuneration system of officers and the preparatory data of the remuneration of its directors and officers which were resolved and passed by its Board of Directors. | The Chairman consulted all present members, and the proposal passed unanimously. | No comments were made, therefore no further action was taken.                   |
|                                                                | Please review the preparatory information regarding the subsidiary SPIL's remuneration of the directors and officers which was resolved and passed by its Board of Directors.                                                                       |                                                                                  |                                                                                 |
|                                                                | Proposed to formulate a namelist of the granted directors or officers who are also employees for the Company's 1st issuance of employee stock option in 2018 and their granted shares.                                                              |                                                                                  |                                                                                 |
| The 2nd meeting of the 2nd Remuneration Committee (2018.11.15) | Please review the information regarding the subsidiary ASE's submission of the remuneration system of officers and the preparatory data of the remuneration of its directors and officers which were resolved and passed by its Board of Directors. | The Chairman consulted all present members, and the proposal passed unanimously. | No comments were made, therefore no further action was taken.                   |
|                                                                | Please review the preparatory information regarding the subsidiary SPIL's remuneration of the directors and officers which was resolved and passed by its Board of Directors.                                                                       |                                                                                  |                                                                                 |
|                                                                | Proposed to formulate a namelist of the granted directors or officers who are also employees for the Company's 2nd issuance of employee stock option in 2018 and their granted shares.                                                              |                                                                                  |                                                                                 |

**3.4.5 Implementation of Corporate Social Responsibility: (e.g. systems and measures of environmental protection, community involvement, social contributions, social services, social welfare, consumer rights, human rights, health and safety, and other corporate social responsibility activities, and how they're implemented)**

| Assessment Item                                                                                                                                                          | Implementation |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Differences from the Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                          | Yes            | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                |
| 1. Implementation of Corporate Governance                                                                                                                                |                |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                |
| (1) Does the Company have a corporate social responsibility policy and evaluate its implementation?                                                                      | V              |    | The Company has regulated <i>ASE Group Corporate Sustainability and Citizenship Policy</i> and <i>Corporate Social Responsibility Best Practice Principles</i> , and have been disclosed on the Company website respectively at <a href="http://www.aseglobal.com/ch/csr.html">http://www.aseglobal.com/ch/csr.html</a> and <a href="http://ir.aseglobal.com/c/ir_doc.php">http://ir.aseglobal.com/c/ir_doc.php</a> . Based on the relevant policies, the Company and its subsidiaries have launched the program of implementing the Corporate Social Responsibilities (CSR), and Board of Directors will supervise and review the effectiveness of the implementation periodically. | No material differences                                                                                                        |
| (2) Does the Company hold regular CSR training?                                                                                                                          | V              |    | The Company has instructed its subsidiaries to set out CSR training programs on an annual basis, provide new and in-service employees with regular CRS training according to the programs, and assist employees to understand the essence and approaches of achieving CSR.                                                                                                                                                                                                                                                                                                                                                                                                           | No material differences                                                                                                        |
| (3) Does the Company have a dedicated ( or tasked) CSR organization authorized by the Board of Directors for senior management, which reports to the Board of Directors? | V              |    | The Corporate Sustainability Development Committee of the Company consists of the Company's directors and top management and which is responsible for guiding and supervising the development of ASE Group's global, environmental and social strategies. It reports to the                                                                                                                                                                                                                                                                                                                                                                                                          | No material differences                                                                                                        |

| Assessment Item                                                                                                                                                           | Implementation |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Differences from the Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                           | Yes            | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                |
| (4) Does the Company set a reasonable remuneration policy, integrate employee appraisal with CSR policy, and set clear and effective incentive and disciplinary policies? | V              |    | <p>Board of Directors annually and establishes “Group Corporate CSR Center” as the dedicated unit responsible for implementing CSR, evaluating the Group’s issues and performance around sustainability, coordinating and driving the target-setting of CSR, and implementing the CSR programs. This unit reports directly to the Committee. The program of implementing CRS focuses on six main areas: corporate governance, environmental sustainability, human capitals, supply chain development, corporate citizen and social engagements, and stakeholder engagement and information disclosure.</p> <p>The Company instructs its subsidiaries to periodically adjust the salary structures and welfare according to the local regulations and market situations. There are no wage differences by genders, ethnicity, nationalities, and age. With respect to the appointment, performance evaluation, and promotion system, the company shall comply with the Act of Gender Equality in Employment and will not treat employees differently based on their gender or sexual orientation.</p> <p>To maintain a high level of disciplines of employees, the Company instructs its subsidiaries to draw up Employee Conduct Guidelines, which clearly defines measures for rewards and punishments as the highest standard of codes of ethics and commitment that employees shall comply with.</p> | No material differences                                                                                                        |
| 2. Sustainable Environmental Development<br>(1) Is the Company committed to improve resource efficiency and to the use of                                                 | V              |    | The Company instructs its subsidiaries to plan a management mechanism of power, water resources, and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No material differences                                                                                                        |

| Assessment Item                                                                                                                                                                     | Implementation |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Differences from the Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                     | Yes            | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                |
| renewable materials with low environmental impact?                                                                                                                                  |                |    | consumables and to continue to improve the efficiency of the supply facilities or optimize the modules. The subsidiaries shall comply with <i>ASE Group Corporate Sustainability and Citizenship Policy</i> and <i>Corporate Social Responsibility Best Practice Principles</i> and achieve the targets of minimizing the consumption of resources including air conditioning, lighting, energy-saving of processes, and water resource recycling                                                                                                                     |                                                                                                                                |
| (2) Has the Company set an environmental management system designed to industry characteristics?                                                                                    | √              |    | For the implementation of environmental protection, the Company has instructed its subsidiaries to conform the relevant laws and regulations and to establish an environmental management system pursuant to ISO14001. In addition to regular audits to ensure compliance with statutory requirements, the Company formulates a pollution prevention and equipment improvement and promotion plan every year, and sets up the annual objectives in order to effectively reduce pollution emissions and review the environmental management system in a timely manner. | No material differences                                                                                                        |
| (3) Does the Company track the impact of climate change on its operations, carry out greenhouse gas inventories, and set energy conservation and greenhouse gas reduction strategy? | √              |    | The Company instructs its subsidiaries to be aware of the impact of its operational activities which is caused by the climate change. It established a greenhouse gas management system pursuant to ISO 14064. The Company conducts annual audits of greenhouse gas inventories and sets reduction goals each year to curb emissions.                                                                                                                                                                                                                                 | No material differences                                                                                                        |
| 3. Maintenance of Social Welfare                                                                                                                                                    |                |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                |
| (1) Does the Company set related management policies and procedures in                                                                                                              | √              |    | The Company established the <i>Corporate Sustainability and Citizenship Policy</i> , <i>Code of Business Conduct</i> and                                                                                                                                                                                                                                                                                                                                                                                                                                              | No material differences                                                                                                        |

| Assessment Item                                                                                              | Implementation |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Differences from the Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|--------------------------------------------------------------------------------------------------------------|----------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                              | Yes            | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                |
| compliance with regulations and internationally recognized human rights treaties?                            |                |    | <i>Ethics, and Code of Practice for Corporate Social Responsibility</i> to guarantee fundamental labor rights, comply with national labor regulations, and ensure a good working environment, health, and safety for its employees. For further protection and promotion of human rights, ASE Group supports and respects international standards, including the UN <i>Universal Declaration of Human Rights</i> , the first & second principles of UN <i>Global Compact</i> , UN <i>Guiding Principles on Business and Human Rights</i> , ILO <i>International Labor Standards</i> , <i>Declaration of Fundamental Principles and Rights at Work</i> , as well as relevant local laws and regulations. Additionally, The Company established the ASE Human Rights Policy and <i>Human Rights Management Principles</i> accordingly to protect employees and also expects our suppliers to uphold these principles in order to protect the human rights. Please refer to the Company Website for details on our human rights management principles. |                                                                                                                                |
| (2) Has the Company established employee appeal mechanisms and channels, and are they managed appropriately? | √              |    | The Company values positive labor-management relations and instructs the subsidiaries to establish a Communication and Dispute Management Policy and various means of communication, including labor-management meetings, the general manager's mailbox, employees opinions boxes, discussion meetings, letter submissions, bulletin boards, internal announcements, education and training, digital bulletins, employee counselling, and e-mail, to collect employee opinions and suggestions and provide responses as necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No material differences                                                                                                        |

| Assessment Item                                                                                                                                                                                                                  | Implementation |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Differences from the Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                  | Yes            | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                |
| (3) Does the Company provide employees with a safe and healthy working environment, with regular safety and health training?                                                                                                     | V              |    | In order to provide employees with a superior workplace environment that complies with health and safety regulations, the Company has instructed the subsidiaries to introduce ISO 45001(fomer OHSAS 18001) and the TOSHMS (Taiwan Occupational Safety and Health Management System). They regularly conduct hazard identification and assessment, take appropriate improvement measures to reduce hazards in the work environment, and host activities on employees occupational health and safety education and health promotion. | No material differences                                                                                                        |
| (4) Has the Company established a mechanism for regular communication with employees and does the company take appropriate measures to notify employees of operational changes which may cause significant impacts on employees? | V              |    | The Company instructs its subsidiaries to regularly organize symposiums and related meetings for new employees, in-service employees, and departments and labor representatives in order to provide employees a communication device under the regular communication. Employees are notified at least two weeks in advance before any significant changes are made (e.g., relocation), and forced labor is prohibited.                                                                                                              | No major differences                                                                                                           |
| (5) Has the Company established effective career development training plans?                                                                                                                                                     | V              |    | The Company instructs its subsidiaries to program the annual plans for training courses based on the training needs of each position and the needs of career capability development, and host the training courses according the programming including orientation, general education, professional training, management on employees of basic level, management and talent development on employees of middle level.                                                                                                               | No material differences                                                                                                        |
| (6) Has the Company established customer rights policies and appeal procedures in its                                                                                                                                            | V              |    | In order to ensure the effective communication and handling of customer opinions and promote real-time                                                                                                                                                                                                                                                                                                                                                                                                                              | No material differences                                                                                                        |

| Assessment Item                                                                                                                                                                                 | Implementation |    |                                                                                                                                                                                                                                                                                                                                                                       | Differences from the Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                 | Yes            | No | Summary                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                |
| R&D, purchasing, production, operations, and services processes?                                                                                                                                |                |    | interaction with customers, the Company has instructed its subsidiaries to establish management procedures for communication with clients and a professional dedicated team of customer service to regularly review client satisfaction, and to provide services to response and communicate with the related customers.                                              |                                                                                                                                |
| (7) Does the Company follow regulations and international standards in the marketing and labeling of its products and services?                                                                 | Y              |    | The Company instructs its subsidiaries to follow the provisions of Taiwan's trade laws, including regulations regarding the import and export of strategic high-tech goods. The marketing and labeling of services operates in accordance with customer needs and operating regulations.                                                                              | No material differences                                                                                                        |
| (8) Does the Company evaluate environmental and social track records before engaging with potential suppliers?                                                                                  | Y              |    | The Company instructs its subsidiaries that the environmental and social impact of suppliers is evaluated during the selection process. Thereafter, a sustainable development questionnaire survey is performed on each supplier annually. On-site and document audits are also conducted to ensure that suppliers meets company requirements.                        | No material differences                                                                                                        |
| (9) Do the Company's contracts with major suppliers include termination clauses that are enforceable if the suppliers violate CSR policy and cause significant environmental and social impact? | Y              |    | The Company instructs its subsidiaries that the Company's contracts with major suppliers are subject to local regulations and compliance with the Company's <i>Supplier Code of Conduct</i> . Evidence of environmental or social violations shall be investigated and dealt with and the supplier's contract will be terminated immediately in severe circumstances. | No material differences                                                                                                        |
| (10) Has the Company established an Information Security and Risk                                                                                                                               | Y              |    | The Company has instructed its subsidiaries to establish "Information Security Policy" that concretely regulate the                                                                                                                                                                                                                                                   | No material differences                                                                                                        |

| Assessment Item                                                                                                                                                                                             | Implementation |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Differences from the Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                             | Yes            | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                |
| Management framework and defined information security policies and concrete management proposals that are disclosed on the Company's website or annual reports?                                             |                |    | <p>rules which the employees shall comply in the daily operations in order to ensure the confidentiality and comprehensiveness of the information proprietary to the clients.</p> <p>In addition, the Company also has instructed its subsidiaries that, in facing the information security risks of the production processes while stepping toward full automation of the Company's manufacturing plants, the subsidiaries shall work with personnel who defines information security standard, personnel of software development, suppliers and personnel of information securities, to look into the development strategies of automated manufacturing plants and the development status of the new automation technologies, list out the vulnerable points on the information security, and appropriately define effective strategies of information security of automated plants.</p> |                                                                                                                                |
| <p>4. Enhanced Information Disclosure</p> <p>(1) Does the Company disclose relevant and reliable CSR information on its website and the Market Observation System website of the Taiwan Stock Exchange?</p> | Y              |    | <p>In order to disclose the Company's philosophy of and commitment to sustainable development and its efforts and persistence in resolving various sustainability issues, the Company publishes an annual CSR report in Chinese and English since the establishment in 2018 and provides PDF files on the company website. It also discloses its CSR information to the Market Observation Post System.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No material differences                                                                                                        |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>5. If the Company has established its corporate social responsibility code of practice pursuant to the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEX Listed Companies, please describe the Company's operational status and differences from the principles:<br/>The Company has referred to the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEX Listed Companies, and established the CSR Code of Practice in 2018. The CSR Code was approved by the Board of Directors and disclosed on the Company Website, there is no material difference between the principles and the operational status.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>6. Other important information to facilitate better understanding of the Company's implementation of corporate social responsibility:</p> <ul style="list-style-type: none"> <li>● The Company has long been committed to giving back to the community. It contributes to society and participates in various welfare activities through the ASE Welfare Foundation and ASE Cultural and Educational Foundation. Our staff generously contributes their time, money, and professional skills to help solve problems involving emergency assistance and education. They are the greatest pillar of our commitment to social participation. We hope to garner mutual trust and assistance and a harmonious relationship with our neighbors and the surrounding community through long-term cooperation and communication, to create a positive and socially beneficial business environment.</li> <li>● Active involvement in environmental protection activities: On 20 December 2013, subsidiary ASE committed to invest at least NT\$100 million annually for 30 years towards the long-term promotion and development of multiple environmental protection undertakings in Taiwan; a commitment the Company has upheld to date. At present, many environmental protection and welfare activities have been planned and implemented through the ASE Cultural and Educational Foundation. Major plans and projects are as follows: <ul style="list-style-type: none"> <li>1. Promoting environmental education (Environmental Education Project in Southern Taiwan, Environmental Technology Research Program, Environmental Science Thesis and Dissertation Awards and Scholarships, Environmental Protection Debate Competition, Smile Taiwan Innovative Education Proposal Competition)</li> <li>2. Enhancing the quality of the environment (Forestation Plan, Taoyuan Algae Reef Conservation Project, EcoMobility World Festival, World Environment Day Beach Cleanup)</li> <li>3. Reducing environmental impacts (Campus LED Project, Operations and Maintenance of the Water Recycling Demonstration Plant at Nanzih Export Processing Zone, Green Chain Promotion Project, Chinese Box Turtle Rehabilitation and Conservation Project)</li> <li>4. Promoting environmental protection and arts and culture (ASE Aesthetic Education Project, Kaohsiung Spring Art Festival)</li> </ul> </li> <li>● For more details of the implementation of CSR, Please refer to the annual reports and CSR Report of the subsidiaries of the Company.</li> </ul> |
| <p>7. Other information regarding the Company's CSR Reports if they are verified by related certified institutions:<br/>The ASE Technology Holding Co., Ltd. was newly established in 2018, and will issue the first CSR report in 2019, therefore it's not applicable at present.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.6 Ethical Management and Implementation Measures:

The Status of Implementation of Ethical Management:

| Assessment Item                                                                                                                                                                                                                                                                                    | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Differences from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                    | Yes                   | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                             |
| 1. Establishment of Ethical Management Policies and Programs<br>(1) Does the Company address its ethical management policies and measures and the committed implementation of such policies by the Board of Directors and the management team in its regulations and publicly available documents? | V                     |    | The Board of Directors approved and passed a series of ethical corporate management policies, including the Code of Business Conduct and Ethics, Ethical Corporate Management Best Practice Principles, and Procedures for Ethical Management and Guidelines for Conduct. Our ethical corporate management policies, methods and the implementation of relevant policies by the directors and the management are detailed in the Company's website. Please refer to the Company website <a href="http://www.aseglobal.com/ch/csr.html">http://www.aseglobal.com/ch/csr.html</a> . | No material differences                                                                                                     |

| Assessment Item                                                                                                                                                                                                                                                                                             | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Differences from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                             | Yes                   | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                             |
| (2) Does the Company have enforceable policies to prevent from unethical conduct with clearly stipulated implementation procedures, guidelines, disciplinary actions for violations, and complaint procedures?                                                                                              | V                     |    | The Board of Directors has passed and announced a range of management and integrity policies, including the Code of Business Conduct and Ethics, Ethical Corporate Management Best Practice Principles, and Fair Competition and Anti-Trust Compliance Policy, as well as the Procedures for Ethical Management and Guidelines for Conduct and the Regulations for Anti-Corruption Measures, to define and describe relevant procedures, illustrate the behavioral guidelines, establish reporting systems to prevent unethical conduct. Ethics regulations and penalties of violation are specified in the work rules, and employees are requested to comply.                                                 | No material differences                                                                                                     |
| (3) Has the Company established appropriate compliance measures for the business activities prescribed in Paragraph 2, Article 7 of the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies, and any other such activities associated with high risk of unethical conduct? | V                     |    | <p>The Company's Ethical Corporate Management Best Practice Principles clearly prohibits directors, officers, and employees from engaging in the following acts, and checks and audits are performed according to internal audit procedures to uphold ethical business conduct:</p> <ol style="list-style-type: none"> <li>1. Bribery</li> <li>2. Illegal political contributions</li> <li>3. Improper charitable donations or sponsorships</li> <li>4. Providing or accepting unreasonable gifts, money, or other improper benefits.</li> <li>5. Infringement of trade secrets, trademarks, patents, copyrights, and other intellectual property rights</li> <li>6. Engaging in unfair competition</li> </ol> | No material differences                                                                                                     |

| Assessment Item                                                                                                                                                                        | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Differences from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                        | Yes                   | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             |
| 2. Implementation of Ethical Management                                                                                                                                                |                       |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |
| (1) Does the Company evaluate the ethical track record of whom it has business relationship with and include clauses of business conduct and ethics related in the business contracts? | V                     |    | Before the business transaction, the Company will perform a credit check on the business partner and exclude those partners with unethical records. The Company also specifies terms of ethical conduct in its business agreements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No material differences                                                                                                     |
| (2) Has the Company established a dedicated( or tasked) ethical corporate management unit that reports directly to the Board of Directors on a regular basis?                          | V                     |    | Sustainable Development Committee of the Group comprises directors and top management of the Company. As the highest managing organization governing commercial behavior and business ethics, the Sustainable Development Committee of the Group is in charge of the establishment, supervision, and execution of the policy in ethical corporate management. The organization shall review the status of promotion and compliance on a yearly basis and report to the Board of Directors of the Company. Furthermore, to soundly fulfill corporate governance, the Company Governance Team under the Sustainable Development Committee of the Group shall be established to promote the policy of ethical corporate management to each operating base of ASE Technology Holding Co., Ltd. | No material differences                                                                                                     |

| Assessment Item                                                                                                                                                                                               | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Differences from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                               | Yes                   | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             |
| (3) Has the Company established and implemented policies that prevent conflicts of interests and provide appropriate channels for communication and complaint?                                                | V                     |    | The Company clearly specifies its conflict of interest policy in the Code of Business Conduct and Ethics, Ethical Corporate Management Best Practice Principles, and Procedures for Ethical Management and Guidelines for Conduct. It has established appropriate statements and consultation channels based on relevant regulations. In addition, the directors of the Company shall practice self-discipline and voluntarily and refrain themselves from discussion and voting with respect to any proposal submitted to the Board of Directors that may involve the director's own interest and may lead to the detriment of the Company's interest. Directors shall also not collude with one another. | No material differences                                                                                                     |
| (4) Has the Company established effective accounting and internal control systems to implement ethical corporate management policies, and are they regularly audited by the internal audit department or CPA? | V                     |    | The Company has effective accounting and internal control systems. Concealed booking or undisclosed accounts are prohibited. To ensure the effectiveness of the design and implementation of the system, internal auditors carry out audits for the aforementioned situations irregularly.                                                                                                                                                                                                                                                                                                                                                                                                                 | No material differences                                                                                                     |
| (5) Does the Company provide internal and external ethical conduct training programs on a regular basis?                                                                                                      | V                     |    | Besides holding yearly training related to ethical corporate management for the management and promoting ethical behavior in business to the suppliers, the Company and its subsidiaries also design online courses to launch the education training on business conduct and policy and regulation related to ethics for the employees.                                                                                                                                                                                                                                                                                                                                                                    | No material differences                                                                                                     |

| Assessment Item                                                                                                                                                                                                                          | Implementation Status |    |                                                                                                                                                                                                                                                                                                                                                                                                                                        | Differences from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies and Their Reasons |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                          | Yes                   | No | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                             |
| 3. Reporting System                                                                                                                                                                                                                      |                       |    |                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                             |
| (1) Has the Company established a specific report and reward system, set up conveniently accessible whistle-blowing channel, and designate responsible individuals to handle the reports received?                                       | V                     |    | The Company has whistle-blowing channels and specifies these channels in the Procedures for Ethical Management and Guidelines for Conduct. For information about the Company's whistle-blowing channels and systems, please refer to the company website (as previously mentioned).                                                                                                                                                    | No material differences                                                                                                     |
| (2) Has the Company established standard operating procedures for the acceptance and investigation of whistle-blowing reports, and mechanisms to ensure confidentiality?                                                                 | V                     |    | When the Company receives any report of a violation, investigation and disciplinary action will be taken in accordance with Article 21 of the Procedures for Ethical Management and Guidelines for Conduct and Regulation for Reporting Violation to Ethical Operation.                                                                                                                                                                | No material differences                                                                                                     |
| (3) Has the Company adopted proper measures to protect the whistle-blowers from inappropriate disciplinary actions due to their whistle-blowing?                                                                                         | V                     |    | Article 21 of the Company's Procedures for Ethical Management and Guidelines for Conduct stipulates and the regulations for reporting violation to ethical operation clarify clearly that the case handler shall maintain the confidentiality of the whistle-blowers' identities and the report contents. The Company pledges to protect the whistle-blowers from any inappropriate disciplinary actions due to their whistle-blowing. | No material differences                                                                                                     |
| 4. Enhanced Information Disclosure                                                                                                                                                                                                       |                       |    |                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                             |
| (1) Does the Company disclose relevant and reliable information regarding its ethical corporate management policies and their implementation on its website and the Market Observation Post System website of the Taiwan Stock Exchange? | V                     |    | The Company publicly discloses its policies and regulations related to corporate ethical management on the Company's website, the URL is as mentioned previously. The operation status and promotion outcomes of the corporate ethical management will be illustrated in detail on the Company's website and the CSR Report. Please refer to the company website (as previously mentioned).                                            | No material differences                                                                                                     |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>5. If the Company has established its ethical corporate management code of practice pursuant to the Ethical Corporate Management Best-Practice Principle for TWSE/TPEX Listed Companies, please describe the Company's operational status and deviations from the principles:<br/>The Company established its Ethical Corporate Management Best Practice Principles by referencing the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies in 2018. The Ethical Corporate Management Best Practice Principles have been reviewed and passed by the Board of Directors of the Company and disclosed on the Company website. There is no material difference from the Ethical Corporate Management Best-Practice Principle for TWSE/TPEX Listed Companies in actual practice.</p>                                                                                                                                                                     |
| <p>6. Other important information to facilitate better understanding of the Company's ethical corporate management (For example, the Company advocates its determination and policies on ethical corporate management to its suppliers and invites them to participate in education and training courses and the review and amendment of the Company's Ethical Corporate Management Best Practice Principles): The Company established the ASE Supplier Code of Conduct by referencing its Code of Business Conduct and Ethics and the Responsible Business Alliance Code of Conduct. Suppliers are required to meet labor, health and safety, environmental, business ethics, and management systems criteria and fully comply with the laws and regulations of the countries in which they operate to ensure safe working environments in the supply chain, respect and dignity for workers, and operations complying with environmental protection criteria and business ethics.</p> |

**3.4.7 If the Company has established corporate governance code of practice and regulations, disclose the means of accessing this information:**

**The Company's Code of Practice for Corporate Governance, Code of Practice for Corporate Social Responsibility, and Ethical Corporate Management Best Practice Principles are disclosed on the Company website.**

**3.4.8 Other important information that may facilitate better understanding of the Company's corporate governance: None.**

### 3.4.9 Internal Control System and Implementation Status

#### 1. Statement on Internal Control

ASE Technology Holding Co., Ltd.

Statement on Internal Control

Date: February 26, 2019

Based on the findings of a self-assessment, ASE Technology Holding Co., Ltd. states the following with regard to its internal control system during the year 2018:

1. The Company acknowledges and understands that the establishment, implementation, and maintenance of the internal control system are the responsibility of the Board of Directors and the management, and that the Company has already established such a system. The purpose is to provide reasonable assurance to the effectiveness and efficiency of business operations (including profitability, performance, and security of assets), financial reporting with reliability, timeliness and transparency, and compliance with applicable rulings, laws and regulations.
2. Internal control system possess inherent limitations. Regardless of perfection of system designed, an effective internal control system can provide only reasonable assurance of the three aforementioned objectives. Furthermore, its effectiveness may change due to changes in the Company's environment and circumstances. However, self-supervision mechanisms were implemented within the Company's internal control policies and the Company will take immediate remedial actions once the deficiencies have been identified.
3. The Company determines the effectiveness of the design and implementation of its internal control system in accordance with the items stipulated in the *Governing Regulations for the Establishment of Internal Control Systems by Public Companies* (hereinafter, the Governing Regulations) that are related to the effectiveness of internal control systems. The criteria introduced by the Governing Regulations cover the process of management control and consist of five major elements, each representing a different stage of internal control: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring activities. Each of the elements in turn contains certain audit items. Please refer to the Governing Regulations for details.
4. The Company has adopted the aforementioned measures for the evaluation of the effectiveness of the design and implementation of the internal control system.
5. Based on the findings of the aforementioned evaluation, the Company believes that the design and implementation of its internal control system as of December 31, 2018 (including supervision and management of subsidiaries), including the effectiveness and efficiency in operation; the reliability, timeliness, and transparency in financial reporting; and compliance with relevant regulatory requirements, is effective and the achievement of the aforementioned objectives can be reasonably assured of.
6. This statement shall be an integral part of the annual report and prospectus of the Company and will be released to the public. If any illegality such as fraudulent information and concealment are discovered in the content made public, the Company shall be held legal liability under Article 20, Article 32, Article 171, and Article 174 of the Securities and Exchange Act.
7. This statement was passed in the Board of Directors' meeting held on February 26, 2019, with none of the thirteen attending directors expressing dissenting opinions, and the remainder all affirming the content of this statement.

ASE Technology Holding Co., Ltd

Chairman: Jason C.S Chang

General Manager: Richard H.P. Chang

2. If CPA was engaged to conduct a special audit of internal control system, provide its audit report: None.



**3.4.10 Description of Legal Penalties Imposed on the Company and its Internal Staff; Disciplinary Actions Imposed by the Company on Internal Staff who are in Violation of the Internal Control System, Principal Deficiencies, and Improvements:None.**

**3.4.11 Major Resolutions of the General Shareholders' Meetings and the Board of Directors' Meetings in the Most Recent Year and as of the Date of this Annual Report:**

**Major Resolutions of General Shareholders' Meetings**

| Date                                                              | Major Resolutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Implementation Status                                                                                                                     |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Extraordinary General Shareholders' Meeting held on June 21, 2018 | 1. Approved proposal for cash distributed from capital surplus of the Company                                                                                                                                                                                                                                                                                                                                                                                                                                   | August 18, 2018 was set as the ex-dividend date, and September 5, 2018 was set as the capital surplus issuance date (NT\$10,795,979,705). |
|                                                                   | 2. Approved the Company's "Articles of Incorporation".                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Registration was approved by the Ministry of Economic Affairs on July 25, 2018 and disclosed on the Company website.                      |
|                                                                   | 3. Approved the revised version of the Company's "Rules Governing the Election of Directors and Supervisors" and renamed it as the "Rules Governing the Election of Directors".                                                                                                                                                                                                                                                                                                                                 | Operations were implemented pursuant to the amended regulations and disclosed on the Company website.                                     |
|                                                                   | 4. Approved the revised version of the Company's "Procedure for the Acquisition or Disposal of Assets".                                                                                                                                                                                                                                                                                                                                                                                                         | Operations were implemented pursuant to the amended regulations and disclosed on the Company website.                                     |
|                                                                   | 5. Re-elect the members of the Board of Directors of the Company:<br>the outcomes were as follows:<br>Juridical Director: A.S.E. Enterprises Limited; Juridical Director (Representative): Jason C.S. Chang, Richard H.P. Chang, Bough Lin, Chi-Wen Tsai, Tien Wu, Joseph Tung, Raymond Lo, TS Chen, and Jeffrey Chen;<br>Director: Rutherford Chang<br>Independent Directors: Sheng-Fu You, Ta-Lin Hsu, and Mei-Yueh Ho.                                                                                       | Registration was approved by the Ministry of Economic Affairs on July 25, 2018 and disclosed on the Company website.                      |
|                                                                   | 6. Approved to waive of non-competition clauses for new-elected directors of the Company.<br>Newly elected directors free from non-competition clauses:<br>Representatives of Juristic-person Director (A.S.E. Enterprises Limited): Jason Chang (Group CEO), Richard Chang (General Manager), Bough Lin, Chi-Wen Tsai, Tien Wu (Group COO), Joseph Tung (Group CFO), Raymond Lo, TS Chen, and Jeffrey Chen;<br>Director: Rutherford Chang;<br>Independent Directors: Sheng-Fu You, Ta-Lin Hsu, and Mei-Yueh Ho | Announced on the Market Observation Post System and implemented accordingly                                                               |

## Major Resolutions of Board of Directors

| <u>Date</u> | <u>Major Resolutions</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018.02.12  | <ol style="list-style-type: none"><li>1. Approved a proposal for the election of the Chairman and Vice Chairman</li><li>2. Approved a proposal for the effective date of the joint stock exchange between Advanced Semiconductor Engineering, Inc. and Siliconware Precision Industries Co., Ltd.</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2018.04.30  | <ol style="list-style-type: none"><li>1. Approved a proposal to establish the Rules and Procedures for Board of Directors Meetings</li><li>2. Approved a proposal to establish the Compensation Committee Charter</li><li>3. Approved a proposal to establish the Audit Committee Charter</li><li>4. Approved a proposal to establish the Procedures to Apply for Suspension and Resumption of Trading Operations</li><li>5. Approved a proposal to establish the ASE Industrial Holding Co., Ltd. and Subsidiaries Accounting Policy for the Company and its subsidiaries</li><li>6. Approved a proposal to establish the Internal Control System, Internal Control System – Operational Regulations for the Management of Other Controls, and Internal Audit Implementation Rules</li><li>7. Approved a proposal to establish the Code of Business Conduct and Ethics</li><li>8. Approved a proposal to elect the Company's CEO, General Manager, COO, CFO, Group Controller, and Internal Audit Officer</li><li>9. Approved a proposal to waive of non-competition clauses for the Company's general manager</li><li>10. Approved a proposal to elect the members of the 1st Compensation Committee</li><li>11. Approved a proposal to contract a CPA firm and a CPA</li><li>12. Approved a proposal to apply for a five-year syndicated loan with a maximum line of credit limit of NT\$90 billion to finance for the joint share exchange between Advanced Semiconductor Engineering, Inc. and Siliconware Precision Industries Co., Ltd.</li><li>13. Approved a proposal to establish the 2018 Audit Plan</li><li>14. Approved a proposal for general assumption of rights and obligations regarding the employee stock option plan issued by Advanced Semiconductor Engineering, Inc.</li><li>15. Approved a proposal of cash distributed from capital surplus of the Company</li><li>16. Approved a proposal to amend the "Articles of Incorporation" of the Company</li><li>17. Approved a proposal of the revised version of the Company's " Rules Governing the Election of Directors and Supervisors" and renamed it as the "Rules Governing the Election of Directors"</li><li>18. Approved a proposal of the revised version of the Company's "Procedure for the Acquisition or Disposal of Assets"</li><li>19. Approved a proposal to submit a request for re-electing the members of the Board of Directors of the Company at the General Shareholders' Meeting</li><li>20. Approved a proposal to submit request for approval to waive of non-competition clauses for new-elected directors of the Company at the General Shareholders' Meeting</li><li>21. Approved a proposal for the date, location, and agenda of the 2018 1st Extranordinary General Shareholders' Meeting</li><li>22. Approved a proposal to appoint Citibank, N.A., as the depository institution of the Company's American Depositary Receipt</li></ol> |

| <u>Date</u> | <u>Major Resolutions</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018.05.24  | Approved a proposal to review the list of candidates for independent directors nominated by more than 1% of the shareholders of the Company                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2018.06.22  | <ol style="list-style-type: none"> <li>1. Approved a proposal to elect the Chairman and Vice Chairman</li> <li>2. Approved a proposal to amend the Rules and Procedures for Board of Directors Meetings</li> <li>3. Approved a proposal to amend the Compensation Committee Charter</li> <li>4. Approved a proposal to amend the Procedures to Apply for Suspension and Resumption of Trading Operations</li> <li>5. Approved a proposal to amend the Code of Practice for Corporate Governance and Regulations Governing Board Performance</li> <li>6. Approved a proposal to amend the Ethical Corporate Management Best Practice Principles, Procedures for Ethical Management and Guidelines for Conduct, Regulations for Anti-Corruption Measures, and Fair Competition and Anti-Trust Compliance Policy</li> <li>7. Approved a proposal to amend the Code of Practice for Corporate Social Responsibility</li> <li>8. Approved a proposal to amend the Clawback Policy for Officers' Compensation</li> <li>9. Approved a proposal to amend the Stock Ownership Guidelines for Directors of the Company who hold senior management positions within the Company and its major subsidiaries</li> </ol> |
| 2018.07.13  | <ol style="list-style-type: none"> <li>1. Approved a proposal to amend the Internal Control System – Operational Regulations for the Management of Other Controls</li> <li>2. Approved a proposal to elect the members of the 2nd Compensation Committee</li> <li>3. Approved a proposal to establish the Code of Practice for Corporate Social Responsibility</li> <li>4. Approved a proposal to determine the record date of the capitalization in order to apply the amendment registration for the capital amount of exercised shares that are exercised from the first and second issuance of ASE Stock Option Plan of 2010 and exercised from ASE Stock Option Plan of 2015.</li> <li>5. Approved a proposal to determine the ex-dividend date and issuance date for the cash distribution from the Company's capital surplus.</li> </ol>                                                                                                                                                                                                                                                                                                                                                            |
| 2018.08.09  | Approved a proposal for the issuance of the First Employee Stock Option Plan of the Company                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2018.09.26  | A resolution was passed for recognition to revise the First Employee Stock Option Plan of the Company.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2018.11.06  | <ol style="list-style-type: none"> <li>1. The report on the insurance for the directors, supervisors and important staffs of Company (including affiliated companies) in 2018.</li> <li>2. A resolution was passed to negotiate with the Securities and Futures Investors Protection Center with respect to staying the litigation of dismissal of Tien Wu as the director of the Company.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2018.11.19  | A resolution was passed with respect to the proposal of the issuance units of 2nd issuance of 2018 Employee Stock Option Plan of the Company and namelist of the optionees.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2018.12.19  | <ol style="list-style-type: none"> <li>1. Resolution was passed to revise ASE Technology Holding Co., Ltd. and Subsidiaries Accounting Policy.</li> <li>2. A resolution was passed to revise the Internal Control System –</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| <u>Date</u> | <u>Major Resolutions</u>                                                                                                                                                                                                       |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | Administration Regulation for Other Internal Control of the Company.                                                                                                                                                           |
|             | 3. A resolution was passed to establish the Procedures for the Acquisition or Disposal of Assets of the Company.                                                                                                               |
|             | 4. A resolution was passed to establish the Regulation for Reporting Violation to Ethical Operation of the Company.                                                                                                            |
|             | 5. A resolution was passed to acquire USI Global Inc., a subsidiary which the Company holds 100% of its shares.                                                                                                                |
|             | 6. A resolution was passed to establish the Company's Annual Audit Plan of 2019.                                                                                                                                               |
| 2019.01.15  | A resolution of the record date of cash capital increase for the newly issued shares that employees exercised the first and second issuance of ASE Stock Option Plan of 2010 and exercised from ASE Stock Option Plan of 2015. |
| 2019.02.26  | 1.A resolution was passed in regards to 2018 Consolidated Financial Statements and Parent Company Only Financial Statements.<br>2.A resolution was passed to issue the 2018 Statement on Internal Control of the Company.      |

**3.4.12 Written or Otherwise Recorded Dissenting Opinions Made by Directors or Supervisors Regarding Important Resolutions Made in Board of Directors' Meetings in the Most Recent Year and as of the Date of this Annual Report: None.**

**3.4.13 Resignation or Termination of Chairman, General Manager, Head of Accounting, Head of Finance, Head of Internal Controls, or Head of R&D in the Most Recent Year and as of the Date of this Annual Report:None.**

### 3.5 CPA Service Fees

#### Range of CPA Service Fees

| CPA Firm          | Name of CPA     |                | Audit Period          | Remarks                                  |
|-------------------|-----------------|----------------|-----------------------|------------------------------------------|
| Deloitte & Touche | Jia-Ling Chiang | Cheng-Hung Kuo | 2018.04.30~2018.12.31 | ASEH was newly established on 2018.04.30 |

Unit: NT\$ in thousands

| Range ( in thousands ) |                               | Items | Audit Fees | Non-Audit Service Fees | Total |
|------------------------|-------------------------------|-------|------------|------------------------|-------|
| 1                      | Less than NT\$2,000           |       | —          | 205                    | 205   |
| 2                      | NT\$2,000 (incl.)— NT\$4,000  |       | —          | —                      | —     |
| 3                      | NT\$4,000 (incl.)— NT\$6,000  |       | —          | —                      | —     |
| 4                      | NT\$6,000 (incl.)— NT\$8,000  |       | —          | —                      | —     |
| 5                      | NT\$8,000 (incl.)— NT\$10,000 |       | 9,335      | —                      | 9,335 |
| 6                      | NT\$10,000 and above          |       | —          | —                      | —     |
| Total                  |                               |       | 9,335      | 205                    | 9,540 |

3.5.1 If the amount of non-audit service fees paid to CPAs, CPA firms, and their affiliates is over a quarter of the audit fees, the amount of the audit and non-audit service fees and the non-audit services solicited shall be disclosed.

Unit: NT\$ in thousands

| CPA Firm        | Name of CPA                     | Audit Fees | Non-Audit Service Fees |                      |                 |        |          | Audit Period          | Remarks                                                                                                          |
|-----------------|---------------------------------|------------|------------------------|----------------------|-----------------|--------|----------|-----------------------|------------------------------------------------------------------------------------------------------------------|
|                 |                                 |            | System Design          | Company Registration | Human Resources | Misc.* | Subtotal |                       |                                                                                                                  |
| Deloitte Touche | Jia-Ling Chiang, Cheng-Hung Kuo | \$9,335    | —                      | —                    | —               | \$205  | \$205    | 2018.04.30~2018.12.31 | Other non-audit services, including service fees of reviewing the issuance of employee stock options and others. |

\*Non-audit service fees are presented separately according to service category. Details of miscellaneous services shall be listed in the remarks column if the non-audit service fee under the "Misc." category accounts for more than 25% of the total non-audit service fee.

3.5.2 If the Company changes its CPA firm and the audit fees paid for the year in which the change takes place are lower than those in the previous year, the audit fee reduction amount and the reason for the decrease in fees shall be disclosed: Not applicable.

3.5.3 If audit fees have decreased by over 15% compared to the previous year, the audit fee reduction amount and the reason for the decrease shall be disclosed: Not applicable.

### 3.6 Change of CPA

3.6.1 Predecessor CPA:None

3.6.2 Successor CPA:None

3.6.3 Reply by predecessor CPA regarding Article 10, Subparagraph 6, Item 1 and Item 2-3 of Regulations Governing Information to be Published in Annual Reports of Public Companies: Not applicable.

**3.7 The name and title of any Company Chairman, General Manager, and Officers of Finance or Accounting who have held positions at the appointed CPA firm or its affiliates in the past year shall be disclosed along with their tenure period at said CPA firm or affiliates: Not applicable.**

**3.8 Changes in Shareholding of Directors, Supervisors, Officers, and Major Shareholder Holding More Than 10% of the Shares**

#### 1. Changes in shareholding of Directors, Officers, and Major Shareholders

| Title                               | Name                               | End of 2018                                  |                                                 | Up to the end of February, 2019              |                                                 |
|-------------------------------------|------------------------------------|----------------------------------------------|-------------------------------------------------|----------------------------------------------|-------------------------------------------------|
|                                     |                                    | Increase (Decrease) in Number of Shares Held | Increase (Decrease) in Number of Shares Pledged | Increase (Decrease) in Number of Shares Held | Increase (Decrease) in Number of Shares Pledged |
| Director and major shareholder      | A.S.E. Enterprises Limited         | 684,327,886                                  | 124,235,761                                     | —                                            | —                                               |
| Director (representative)           | Jason Chang (Chairman & Group CEO) | 4,836,678                                    | —                                               | —                                            | —                                               |
|                                     | Richard Chang (Vice Chairman)      | —                                            | —                                               | —                                            | —                                               |
|                                     | Bough Lin                          | 4,238,000                                    | —                                               | —                                            | —                                               |
|                                     | Chi-Wen Tsai                       | 11,600,000                                   | —                                               | —                                            | —                                               |
|                                     | Tien Wu (Group COO)                | 3,877,473                                    | —                                               | —                                            | —                                               |
|                                     | Joseph Tung (Group CFO)            | 2,602,954                                    | —                                               | —                                            | —                                               |
|                                     | Raymond Lo                         | 1,782,821                                    | —                                               | —                                            | —                                               |
|                                     | TS Chen                            | 1,181,821                                    | —                                               | —                                            | —                                               |
|                                     | Jeffrey Chen                       | 1,083,000                                    | 350,000                                         | —                                            | —                                               |
| Director                            | Rutherford Chang                   | 1,577,647                                    | —                                               | —                                            | —                                               |
| Independent Director                | Sheng-Fu You                       | —                                            | —                                               | —                                            | —                                               |
| Independent Director                | Ta-Lin Hsu                         | —                                            | —                                               | —                                            | —                                               |
| Independent Director                | Mei-Yueh Ho                        | —                                            | —                                               | —                                            | —                                               |
| Group Chief of Staff                | David Pan                          | 925,015                                      | —                                               | —                                            | —                                               |
| Group CAO                           | Dtuang Wang                        | 50,000                                       | —                                               | —                                            | —                                               |
| Vice President and Chief Accountant | Murphy Kuo                         | 160,500                                      | —                                               | —                                            | —                                               |
| Vice President                      | Alan Li                            | 210,091                                      | —                                               | —                                            | —                                               |
| Vice President                      | Anne Chang                         | 677,238                                      | —                                               | (35,000)                                     | —                                               |
| Vice President                      | Eddie Chang                        | 60,506                                       | —                                               | —                                            | —                                               |
| Vice President                      | Peili Shen                         | 67,582                                       | —                                               | —                                            | —                                               |

2. Stock transfers with related parties: None.

3. Stock pledges with related parties: None.

### 3.9 Relationships of Related Party, Spouse, Kinships within the Second Degree among the Top Ten Shareholders:

#### Relationships among the Top Ten Shareholders

January 25, 2019\* Units: shares; %

| Name                                                                                         | Shareholding |        | Spouse & Minor |   | Shareholding by Nominee Arrangement |   | Major Shareholders Who Are the Spouse, a Relative Within the Second Degree of Kinship, or Other Related Parties |              | Remarks |
|----------------------------------------------------------------------------------------------|--------------|--------|----------------|---|-------------------------------------|---|-----------------------------------------------------------------------------------------------------------------|--------------|---------|
|                                                                                              | Shares       | %      | Shares         | % | Shares                              | % | Name                                                                                                            | Relationship |         |
| A.S.E. Enterprises Limited                                                                   | 684,327,886  | 15.835 | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| Citibank Taiwan: custody of ASE Depository Certificates                                      | 289,281,424  | 6.694  | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| HSBC: custody of the Company's investment account of value investing Company                 | 260,188,142  | 6.020  | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| Citibank Taiwan: custody of the Singapore government investment account                      | 155,140,401  | 3.590  | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| Fubon Life Insurance Co., Ltd.                                                               | 130,172,628  | 3.012  | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| Cathay Life Insurance Co., Ltd.                                                              | 81,336,230   | 1.882  | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| Nanshan Life Insurance Co., Ltd.                                                             | 73,218,708   | 1.694  | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| The investment account of Ma Shi Investment Fund Corporation under custody of Bank of Taiwan | 63,003,500   | 1.458  | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| Limited Partnership trust account of Yuan Wang Partnership Fund entrusted to HSBC Bank       | 62,007,000   | 1.435  | —              | — | —                                   | — | —                                                                                                               | —            | —       |
| Trust account of Brilliant Capital Profits Limited, with HSBC Bank as the custodian trustee  | 59,111,000   | 1.368  | —              | — | —                                   | — | —                                                                                                               | —            | —       |

\*The Company Shares for calculation of the shareholding rate is the number of shares as of December 31, 2018 including the number of shares which the employees of the Company exercised the employee stock option. (i.e., the outstanding shares as of January 25, 2019 after the amendment registration)

### 3.10 The number of shares of One Enterprise held by the Company, the Directors, Supervisors, Officers of the Company and the Enterprise directly or indirectly controlled by the Company

#### Total Shareholding and Percentage

December 31, 2018; Units: shares; %

| Investee Enterprise*                       | Investment by the Company |         | Investments by the Directors, Supervisors, Officers, and Enterprise Directly or Indirectly controlled by the Company |   | Total Shareholding |         |
|--------------------------------------------|---------------------------|---------|----------------------------------------------------------------------------------------------------------------------|---|--------------------|---------|
|                                            | Shares                    | %       | Shares                                                                                                               | % | Shares             | %       |
| Advanced Semiconductor Engineering, Inc.   | 5,528,783,764             | 100.00% | —                                                                                                                    | — | 5,528,783,764      | 100.00% |
| Siliconware Precision Industries Co., Ltd. | 3,391,748,878             | 100.00% | —                                                                                                                    | — | 3,391,748,878      | 100.00% |
| USI Global Inc.                            | 30,000,000                | 100.00% | —                                                                                                                    | — | 30,000,000         | 100.00% |

\*Long Term Investment under the Equity method adopted by the Company.

January 31, 2019(After adjustment of organization structure); Units: shares; %

| Investee Enterprise*                       | Investment by the Company |         | Investments by the Directors, Supervisors, Officers, and Enterprise Directly or Indirectly controlled by the Company |   | Total Shareholding |         |
|--------------------------------------------|---------------------------|---------|----------------------------------------------------------------------------------------------------------------------|---|--------------------|---------|
|                                            | Shares                    | %       | Shares                                                                                                               | % | Shares             | %       |
| Advanced Semiconductor Engineering, Inc.   | 5,528,783,764             | 100.00% | —                                                                                                                    | — | 5,528,783,764      | 100.00% |
| Siliconware Precision Industries Co., Ltd. | 3,391,748,878             | 100.00% | —                                                                                                                    | — | 3,391,748,878      | 100.00% |
| USI Inc.                                   | 1,757,334,372             | 100.00% | —                                                                                                                    | — | 1,757,334,372      | 100.00% |



## IV. Capital Raising

### 4.1 Capital and Shares

Type of Shares

2018.12.31

| Type of Shares | Authorized Capital |                 |               |                 |               | Remarks |
|----------------|--------------------|-----------------|---------------|-----------------|---------------|---------|
|                | Outstanding shares |                 |               | Unissued shares | Total         |         |
|                | Listed shares      | Unlisted shares | Total         |                 |               |         |
| Common stock   | 4,321,629,382      | 0               | 4,321,629,382 | 678,370,618     | 5,000,000,000 |         |

#### 4.1.1 Sources of Capital

Units: Shares; NT\$

| Year & Month | Issue Price | Authorized Capital |                | Capital Stock |                | Remarks                                            |                                            |                                                          |
|--------------|-------------|--------------------|----------------|---------------|----------------|----------------------------------------------------|--------------------------------------------|----------------------------------------------------------|
|              |             | Shares             | Amount         | Shares        | Amount         | Sources of Capital                                 | Capital Increase by Assets Other than Cash | Approved date and document number                        |
| 2018.04      | 10          | 5,000,000,000      | 50,000,000,000 | 4,318,391,882 | 43,183,918,820 | IPO                                                | None                                       | April 30, 2018<br>Jing Jia San Shang Zi No. 10700043490  |
| 2018.07      | —           | 5,000,000,000      | 50,000,000,000 | 4,319,237,132 | 43,192,371,320 | Exercise of Employee Stock Options: NT\$8,452,500  | None                                       | July 25, 2018<br>Jing Jia San Shang Zi No. 1070007833    |
| 2018.10      | —           | 5,000,000,000      | 50,000,000,000 | 4,320,148,632 | 43,201,486,320 | Exercise of Employee Stock Options: NT\$9,115,000  | None                                       | October 22, 2018<br>Jing Jia San Shang Zi No. 1070010894 |
| 2019.01      | —           | 5,000,000,000      | 50,000,000,000 | 4,321,629,382 | 43,216,293,820 | Exercise of Employee Stock Options: NT\$14,807,500 | None                                       | January 25, 2019<br>Jing Jia San Shang Zi No. 1080001176 |

#### 4.1.2 Composition of Shareholders

January 25, 2019\*

| Type of Shareholders<br>Number | Government<br>Agencies | Financial<br>Institution | Other<br>Juridical<br>Persons | Domestic<br>Natural<br>Persons | Foreign<br>Institutions and<br>Natural<br>Persons | Total**       |
|--------------------------------|------------------------|--------------------------|-------------------------------|--------------------------------|---------------------------------------------------|---------------|
| Number of Shareholders         | 4                      | 1                        | 353                           | 155,767                        | 1,250                                             | 157,375       |
| Shareholding                   | 102,883,990            | 73,218,708               | 553,816,557                   | 507,782,973                    | 3,083,927,154                                     | 4,321,629,382 |
| Shareholding<br>Percentage (%) | 2.381                  | 1.694                    | 12.815                        | 11.750                         | 71.360***                                         | 100.000       |

\*Most recent data provided by the stock agency

\*\*The shares are as of December 31, 2018 which includes the shares exercised from employee stock options and the amendment registration date was on January 25, 2019.

\*\*\*The shareholding percentage of Chinese investors was 0%.

#### 4.1.3 Distribution of Shareholding

##### 1. Common Shares

Par Value: NT\$10 per share; January 25, 2019\*

| Range of Shareholding | Number of<br>Shareholders | Shareholding  | Percentage (%) |
|-----------------------|---------------------------|---------------|----------------|
| 1 ~ 999               | 86,721                    | 22,596,863    | 0.523          |
| 1,000 ~ 5,000         | 53,058                    | 112,744,935   | 2.609          |
| 5,001 ~ 10,000        | 9,002                     | 64,553,159    | 1.494          |
| 10,001 ~ 15,000       | 2,754                     | 33,818,493    | 0.783          |
| 15,001 ~ 20,000       | 1,508                     | 26,495,666    | 0.613          |
| 20,001 ~ 30,000       | 1,343                     | 33,147,616    | 0.767          |
| 30,001 ~ 40,000       | 656                       | 23,018,354    | 0.533          |
| 40,001 ~ 50,000       | 433                       | 19,640,304    | 0.454          |
| 50,001 ~ 100,000      | 778                       | 54,600,730    | 1.263          |
| 100,001 ~ 200,000     | 410                       | 57,657,437    | 1.334          |
| 200,001 ~ 400,000     | 223                       | 64,818,931    | 1.5            |
| 400,001 ~ 600,000     | 113                       | 55,274,402    | 1.279          |
| 600,001 ~ 800,000     | 61                        | 41,608,924    | 0.963          |
| 800,001 ~ 1,000,000   | 37                        | 33,838,928    | 0.783          |
| 1,000,001 and above   | 278                       | 3,677,814,640 | 85.102         |
| Total                 | 157,375                   | 4,321,629,382 | 100.000        |

\*Most recent data provided by the stock agency

##### 2. Preferred Shares: Not applicable.

#### 4.1.4 List of Major Shareholders

January 25, 2019\*

| Name of Major Shareholders                                                                   | Shares | Shareholding | Percentage (%) |
|----------------------------------------------------------------------------------------------|--------|--------------|----------------|
| A.S.E. Enterprises Limited                                                                   |        | 684,327,886  | 15.835         |
| Citibank Taiwan: custody of ASE Depository Certificates                                      |        | 289,281,424  | 6.694          |
| HSBC: entrusted with the Company's investment account                                        |        | 260,188,142  | 6.020          |
| Citibank Taiwan: custody of the Singapore government investment account                      |        | 155,140,401  | 3.590          |
| Fubon Life Insurance Co., Ltd.                                                               |        | 130,172,628  | 3.012          |
| Cathay Life Insurance Co., Ltd.                                                              |        | 81,336,230   | 1.882          |
| Nanshan Life Insurance Co., Ltd.                                                             |        | 73,218,708   | 1.694          |
| The investment account of Ma Shi Investment Fund Corporation under custody of Bank of Taiwan |        | 63,003,500   | 1.458          |
| Limited Partnership trust account of Yuan Wang Partnership Fund entrusted to HSBC Bank       |        | 62,007,000   | 1.435          |
| Trust account of Brilliant Capital Profits Limited, with HSBC Bank as the custodian trustee  |        | 59,111,000   | 1.368          |

\*The Company Shares for calculation of the shareholding rate is the number of shares as of December 31, 2018 including the number of shares that the employees of the Company exercised the employee stock option. (i.e., the outstanding shares as of January 25, 2019 after the amendment registration).

#### 4.1.5 Market Price, Net Worth, Earnings, and Dividends per Share

Unit: NT\$

| Item                             |                               |                               | Year | 2018          | Up to the date of this annual report in 2019 |
|----------------------------------|-------------------------------|-------------------------------|------|---------------|----------------------------------------------|
| Market Price per Share           | Before retroactive adjustment | Highest                       |      | 84.60         | 65.30                                        |
|                                  |                               | Lowest                        |      | 56.10         | 54.00                                        |
|                                  | After retroactive adjustment  | Highest                       |      | (Note 1)      | (Note 1)                                     |
|                                  |                               | Lowest                        |      | (Note 1)      | (Note 1)                                     |
|                                  | Average                       |                               |      | 70.22         | 59.05                                        |
| Net Worth per Share              | Before distribution           |                               |      | 51.94         | (Note 5)                                     |
|                                  | After distribution            |                               |      | (Note 1)      | (Note 5)                                     |
| Earnings per Share               | Weighted Average Shares       |                               |      | 4,251,128,654 | 4,257,839,738                                |
|                                  | Earnings per share (diluted)  | Before retroactive adjustment |      | 5.84          | (Note 5)                                     |
|                                  |                               | After retroactive adjustment  |      | (Note 1)      | (Note 5)                                     |
| Dividends per Share              | Cash dividends                |                               |      | (Note 1)      | —                                            |
|                                  | Stock dividends               | From retained earnings        |      | (Note 1)      | —                                            |
|                                  |                               | From capital surplus          |      | (Note 1)      | —                                            |
|                                  | Cumulative dividends          |                               |      | —             | —                                            |
| Analysis of Return on Investment | Price/Earnings Ratio(Note 2)  |                               |      | 12.02         | (Note 5)                                     |
|                                  | Price/Dividends Ratio(Note 3) |                               |      | (Note 1)      | —                                            |
|                                  | Cash Dividend Yield(Note 4)   |                               |      | (Note 1)      | —                                            |

(Note 1) Determined after approval in the General Shareholders' meeting.

(Note 2) Price/Earnings Ratio = Average Market Price/Earnings per Share.

(Note 3) Price/Dividends Ratio = Average Market Price/Cash Dividends per Share

(Note 4) Cash Dividend Yield = Cash Dividends per Share/Average Market Price.

(Note 5)Earnings not yet settled

#### 4.1.6 Dividend Policies and Implementation

##### 1. Dividend policies

The dividend policy of the Company was approved by the general shareholders' meeting on February 12, 2018.

The Company is at the stage of stable growth. In order to accommodate the capital demand for the present and future business development and satisfy the shareholder's demand for the cash inflow, the Residual Dividend Policy is adopted for the dividend distribution of the Company. The ratio for cash dividends shall be not less than 30% of the total dividends; and the residual dividends shall be distributed in form of stocks in accordance with the distribution plan proposed by the Board of Directors and resolved by the general shareholders' meeting.

##### 2. Proposal for dividend distribution:

(1) The Board of Directors proposed on March 28, 2019 that shareholder dividends to the amount of NT\$10,806,453,705 shall be paid in cash. The cash dividend per share was NT\$2.50.

(2) The proposed distribution of cash dividend will be discussed in the General Shareholders' Meeting of this year and will authorize the Board of Directors to assign the record date of cash dividend after the proposal is approved in the General Shareholders' Meeting.

##### 3. Explanation of anticipated major changes in the dividend policy: Not applicable.

#### 4.1.7 Impact to business performance and earnings per share resulting from stock dividend distribution:

Not applicable. (The Company is not required to disclose the prediction data for the 2019 Financial Statement pursuant to the *Criteria Governing the Public Disclosure of Financial Forecast Information by Public Companies*.)

#### 4.1.8 Remuneration of Employees, Directors, and Supervisors

##### 1. The percentage or range of remuneration of employees and directors as stipulated in the Company's articles of incorporation, which was amended at the Special Shareholders' Meeting held on June 21, 2018:

According to Article 23 of the Articles of Incorporation, if the Company is profitable, 0.1% (inclusive) to 1% (inclusive) of the profits shall be allocated as compensation to employees and 0.75% (inclusive) or less of the profits should be allocated as compensation to directors. While the Company has accumulated losses, the profit shall be set aside to compensate losses before distribution.

The compensation being distributed to employees in the form of stock or cash shall be approved by more than half of the directors at a board meeting at which two-thirds or more of the directors are present and report to the general shareholders' meeting.

"Employees" referred in the two paragraphs above includes employees of subsidiaries who meet certain qualifications. Such qualifications are to be determined by the Board of Directors.

According to Article 24 of the Articles of Incorporation, The annual net income shall be distributed in the order of sequences below:

(1) Making up for losses, if any.

(2) 10% being set aside as legal reserve.

(3) Allocation or reversal of a special surplus reserve in accordance with laws or regulations

set forth by the authorities concerned.

- (4) Addition or deduction of the portion of retained earnings that are equity investment gains or losses that have been realized and measured at fair value through other overall gains or losses.

The remainder plus the undistributed earnings shall be distributed in accordance with the proposal submitted by the Board of Directors and adopted by the general shareholders' meeting.

2. The estimation basis of the remuneration amount paid to employees, directors, and supervisors, calculation basis of shares on the remuneration distributed to employees in stock, and the accounting if there are differences between the estimated the actual distribution amount.

The estimated employee remuneration and director remuneration for 2018 were NT\$45,430,403 and NT\$34,072,801. These figures amounted to 0.20% and 0.15% of the net profit before tax. If the amount is adjusted after the annual consolidated financial statement is disclosed, the differences will be recorded in the following year as a change in accounting estimate.

3. Board Resolution for the Distribution of Remuneration:

Resolution of the March 28, 2019 Board of Director for the allocation of director compensation and employee compensation for 2018 is as follows:

The resolved distribution of employee remuneration is NT\$45,430,000 (paid fully in cash), and that of director remuneration is NT\$34,070,000. The difference between the resolved amount mentioned above and the estimated amount NT\$45,430,403 for employee remuneration and NT\$34,072,801 for director remuneration is NT\$3,204.

4. The actual distribution of remuneration to employees, directors and supervisors (including the number of distributed shares, amount, and share price) in previous year, and whose differences (if any) with the recognized remuneration to employees, directors and supervisors should be disclosed along with the differences, reasons and status.

The Company was established in April of 2018, therefore there is no related information of the previous year.

**4.1.9 Share Repurchase: There is no buyback of stocks of the Company in the most recent year and as of the date of this annual report.**

**4.2 Corporate Bonds: None.**

**4.3 Preferred Stocks: None.**

#### 4.4 American Depositary Receipts:

2019 as of the Date of this Annual Report Unit: US\$

| The issuance date of the original ASE                               |                                           | September, 2000                                                                                                                                                     | June, 2003                                                          |
|---------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Item                                                                |                                           |                                                                                                                                                                     |                                                                     |
| Issue Date                                                          |                                           | September, 2000                                                                                                                                                     | June, 2003                                                          |
| Issuance and Listing                                                |                                           | New York Stock Exchange                                                                                                                                             | New York Stock Exchange                                             |
| Total Amount                                                        |                                           | US \$140,000,000                                                                                                                                                    | US \$86,808,000                                                     |
| Offering Price per Unit                                             |                                           | US\$7 per unit                                                                                                                                                      | US\$2.65 per unit                                                   |
| Units Issued*                                                       |                                           | 20,000,000 units; each unit represents five ASE common shares                                                                                                       | 32,757,600 units; each unit represents five ASE common shares       |
| Underlying Securities                                               |                                           | ASE common shares issued through rights offering                                                                                                                    | ASE issued common shares held by shareholders                       |
| Common Shares Represented                                           |                                           | 100,000,000 ASE common shares; each share has a par value of NT\$10                                                                                                 | 163,788,000 ASE common shares; each share has a par value of NT\$10 |
| Rights and Obligations of ADR Holders                               |                                           | Similar rights and obligations as the shareholders of common shares of the Company                                                                                  |                                                                     |
| Trustee                                                             |                                           | None                                                                                                                                                                |                                                                     |
| Depository Bank                                                     |                                           | Citibank                                                                                                                                                            |                                                                     |
| Custodian Bank                                                      |                                           | Citibank, Taipei Branch                                                                                                                                             |                                                                     |
| Outstanding ADR                                                     |                                           | As of the Date of this Annual Report, the balance of the american depositary receipt was 142,512,061 units, equivalent to 285,024,122 common shares of the Company. |                                                                     |
| Apportionment of expenses for issuance and maintenance              |                                           | None                                                                                                                                                                |                                                                     |
| Terms and conditions in the deposit agreement and custody agreement |                                           | None                                                                                                                                                                |                                                                     |
| Closing Price per ADR                                               | 2018                                      | Highest                                                                                                                                                             | 8.00                                                                |
|                                                                     |                                           | Lowest                                                                                                                                                              | 3.51                                                                |
|                                                                     |                                           | Average                                                                                                                                                             | 5.03                                                                |
|                                                                     | 2019 as of the date of this annual report | Highest                                                                                                                                                             | 4.14                                                                |
|                                                                     |                                           | Lowest                                                                                                                                                              | 3.46                                                                |
|                                                                     |                                           | Average                                                                                                                                                             | 4.01                                                                |

\*Each unit of the American depositary receipt equivalent to 5 common shares was converted to 1.25 units. Each unit of ASE Technology Holding, Co., Ltd. shares is equivalent to 2 shares of the ASE Technology Holding, Co., Ltd. ADR.

#### 4.5 Employee Stock Option Plan (including the status of employee restricted stock awards):

4.5.1 For the purposes of attracting professionals needed by the Company, encouraging employees, increasing employees' recognition of the Company, the competent authority approved to issue the First Employee Stock Option Plan in the August of 2018, and the total number of options to be issued under the plan shall be 150,000,000. Each option is entitled to subscribe one new common share of the Company. The exercise price shall be the closing price of the Company's common shares on the grant date.

According to Article 12, Subparagraph 12.3 of the Joint Share Exchange Agreement, the option plan that were approved to issue in April of 2010 and April of 2015 by competent authority, will be assumed by the Company, and the Company will adjust the stock option exercise price and quantity based on the conversion ratio starting from the effective date of the conversion. According to Article 2, Subparagraph 2.1.4, the employee stock options of the Company which are granted but not exercised yet are as follows:

1. The status of valid employee stock option certificates as of the date of this annual report and effects on shareholder rights:

2019 as of the date of this annual report

| Stock Option Plan                                                                                | The Forth Employee Stock Option Plan (Assumption from ASE)*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 | The Fifth Employee Stock Option Plan (Assumption from ASE)* | ASEH (The Company) The First Employee Stock Option Plan |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------|---------------------------------------------------------|-----------------|---------------------------------------|-----------------------------------------------|---------|-----|-----------|-----|---------|-----|-----------|-----|---------|-----|-----------|-----|---------|------|
|                                                                                                  | First issuance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Second issuance |                                                             | First issuance                                          | Second issuance |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Effective Date                                                                                   | 2010/04/20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 | 2015/04/17                                                  | 2018/08/23                                              |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Grant Date                                                                                       | 2010/05/06                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2011/04/15      | 2015/09/10                                                  | 2018/09/27                                              | 2018/11/23      |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Units for issuance, determined by the Board of Directors                                         | 20,320,850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 | 36,535,000                                                  | 150,000,000                                             |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Percentage of Shares to be issued of the outstanding shares as of the date of issuance           | 0.41%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.07%           | 0.85%                                                       | 0.01%                                                   | 3.05%           |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Period                                                                                           | The Options will expire at the end of the tenth year from the issue date (the "Expiry Date"). The Options may not be transferred, except by inheritance. If the employee or his/her heir(s) is unable to exercise the Options before the Expiry Date, such Options shall elapse and be cancelled.                                                                                                                                                                                                                                                                                                 |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Underlying Shares                                                                                | The Company will issue new common shares as the underlying shares.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Vesting Schedule (%)                                                                             | The Options shall become exercisable from the date two (2) years after the issue date thereof, and the percentage of exercisable Options in different time periods are set forth below.<br><table><tr><th>Numbers of Years after the Issue Date</th><th>Accumulated Percentage of Options Exercisable</th></tr><tr><td>2 years</td><td>40%</td></tr><tr><td>2.5 years</td><td>50%</td></tr><tr><td>3 years</td><td>60%</td></tr><tr><td>3.5 years</td><td>70%</td></tr><tr><td>4 years</td><td>80%</td></tr><tr><td>4.5 years</td><td>90%</td></tr><tr><td>5 years</td><td>100%</td></tr></table> |                 |                                                             |                                                         |                 | Numbers of Years after the Issue Date | Accumulated Percentage of Options Exercisable | 2 years | 40% | 2.5 years | 50% | 3 years | 60% | 3.5 years | 70% | 4 years | 80% | 4.5 years | 90% | 5 years | 100% |
| Numbers of Years after the Issue Date                                                            | Accumulated Percentage of Options Exercisable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| 2 years                                                                                          | 40%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| 2.5 years                                                                                        | 50%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| 3 years                                                                                          | 60%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| 3.5 years                                                                                        | 70%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| 4 years                                                                                          | 80%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| 4.5 years                                                                                        | 90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| 5 years                                                                                          | 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Exercised Shares                                                                                 | 2,729,500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 249,500         | 258,500                                                     | 0                                                       | 0               |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Exercised Amount                                                                                 | NT\$111,363,600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NT\$11,277,400  | NT\$18,870,500                                              | NT\$0                                                   | NT\$0           |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Unexercised Shares                                                                               | 14,774,850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2,567,000       | 36,276,500                                                  | 620,000                                                 | 131,862,500     |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Exercise Price per unexecuted share (current exercise price)                                     | NT\$40.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | NT\$45.2        | NT\$73.0                                                    | NT\$74.1                                                | NT\$56.4        |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Ratio of unexercised shares over the outstanding shares as of the date of this annual report (%) | 0.34%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.06%           | 0.84%                                                       | 0.01%                                                   | 3.05%           |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |
| Impact on shareholders' equity                                                                   | The Option Plan will start to vest within 3 years from the date two years after the issue date. The equity of the shareholders is diluted annually, but the dilution effects are limited.                                                                                                                                                                                                                                                                                                                                                                                                         |                 |                                                             |                                                         |                 |                                       |                                               |         |     |           |     |         |     |           |     |         |     |           |     |         |      |

\*: Each Option is entitled to subscribe one new common share of the Company. Pursuant to the *Joint Share Exchange Agreement*, the Company assumed the employee stock option plan issued by ASE. The price and shares were adjusted according to the conversion ratio (ASE:the Company=1:0.5).

2. Names, Granting and Exercise Status of the Top Ten Officers and Top Ten Employees of the granted Employee Stock Options:

February 28, 2019

|                                                    | Title                               | Name               | Issuance Date                                        | Number of Stock Options Granted | Percentage of Stock Options in Outstanding Shares | Exercised               |                |                 |                                                   | Exercised               |                |                 |                                                   |
|----------------------------------------------------|-------------------------------------|--------------------|------------------------------------------------------|---------------------------------|---------------------------------------------------|-------------------------|----------------|-----------------|---------------------------------------------------|-------------------------|----------------|-----------------|---------------------------------------------------|
|                                                    |                                     |                    |                                                      |                                 |                                                   | Number of Stock Options | Exercise Price | Exercise Amount | Percentage of Stock Options in Outstanding Shares | Number of Stock Options | Exercise Price | Exercise Amount | Percentage of Stock Options in Outstanding Shares |
| Officers                                           | Group CEO                           | Jason C.S. Chang   | 2010.05.06<br>2011.04.15<br>2015.09.10<br>2018.11.23 | 12,918,750                      | 0.30%                                             | 0                       | 0              | 0               | 0.00%                                             | 12,918,750              | 55.82          | 721,065,000     | 0.30%                                             |
|                                                    | General Manager                     | Richard H.P. Chang |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Group COO                           | Tien Wu            |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Group CFO                           | Joseph Tung        |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Group Chief of Staff                | David Pan          |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Group CAO                           | Dtuang Wang        |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Vice President and Group Controller | Murphy Kuo         |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Vice President                      | Alan Li            |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Vice President                      | Anne Chang         |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Vice President                      | Peili Shen         |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    | Vice President                      | Eddie Chang        |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
| Employee stock options granted to Top 10 Employees |                                     | Bough Lin          | 2010.05.06<br>2011.04.15<br>2015.09.10<br>2018.11.23 | 12,075,000                      | 0.28%                                             | 375,000                 | 40.80          | 15,300,000      | 0.01%                                             | 11,700,000              | 55.60          | 650,520,000     | 0.27%                                             |
|                                                    |                                     | Chi-Wen Tsai       |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    |                                     | Raymond Lo         |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    |                                     | Yen-Chun Chang     |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    |                                     | Chun-Che Lee       |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    |                                     | Jeffrey Chen       |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    |                                     | TS Chen            |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    |                                     | Randy Hsiao-Yu Lo  |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    |                                     | Kun-I Chien        |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |
|                                                    |                                     | Chen-Ming Cheng    |                                                      |                                 |                                                   |                         |                |                 |                                                   |                         |                |                 |                                                   |



#### 4.5.2 Employee Restricted Stock Awards:

1. Status of employee restricted stock awards that are yet to completely fulfill the vesting conditions as of the date of this annual report and their impact on shareholders' equity: None
2. Employee restricted stock awards granted to officers and the top 10 employees: None.

#### **4.6 Status of New Shares Issuance due to mergers or acquisition of shares of another company:**

- 4.6.1 Completed new shares issuance due to mergers and acquisitions in the most recent year and as of the date of this annual report: None.
- 4.6.2 New shares issuance due to mergers and acquisitions approved by the Board of Directors in the most recent year and as of the date of this annual report: None.

#### **4.7 Financing Plan and Implementations:**

As of the date of this annual report, unfinished projects that have completed fundraising: None

## V. Operational Highlights

### 5.1 Business Activities

#### 5.1.1 Business Scope

1. The business scope of the Company(ASE Technology Holding Co., Ltd.) and its subsidiaries (hereinafter referred as “the Group”) includes four major categories listed as below because each subsidiary is engaged in different business scope:

(1)Investment : General Investment Business

(2)Assembly and Testing:

IC Service

- Assembly: Package and module design, wafer bumping, chip packaging (or assembly), multi-chip assembly, micro and hybrid module assembly, memory
- Testing: Engineering test, wafer probing and final test
- Materials: Substrate design and manufacturing

(3) Electronics Manufacturing Services

Providing services in the research and development, materials procurement, manufacture, logistics, repair and after services in relation to communications, consumer electronics, computers, memories, industrial and automotive, among other services and businesses for electronic brand owners.

(4) Others

Real estate development and construction, housing sale, property management and commercial space leasing business.

2. Current products of the Group and its Operating Proportion:

| Primary products                                            | Unit: NT\$ in thousands |                  |
|-------------------------------------------------------------|-------------------------|------------------|
|                                                             | 2018                    |                  |
|                                                             | Revenue                 | Sales Percentage |
| Assembly services                                           | 178,308,222             | 48.05%           |
| Testing services                                            | 35,903,202              | 9.68%            |
| Electronics packaging technology and manufacturing services | 151,890,384             | 40.93%           |
| Miscellaneous                                               | 4,990,613               | 1.34%            |
| Total                                                       | 371,092,421             | 100.00%          |

#### 5.1.2 Industry Overview

1. Investment :

The Company integrates the Group’s business strategies and operational objectives through investment holdings. Its goal is to efficiently utilize the Group’s resources through the development of various independent businesses under the investment holding system to enhance the Group’s overall operational performance and competitiveness on the market.

2. Assembly and Testing:

(1) Current Status and Development of the Industry

The escalating US-China trade war , intense international relations and soaring oil price have affected the economy all over the world. According to the report made by

the International Monetary Fund (“IMF”) in the World Economic Outlook issued in early 2019, with the U.S. and China continue to raise tariffs on goods imported from each other and increase tariff barrier, international trade and investment have been under the serious impact. It is estimated that, in 2018 and 2019, the global GDP growth rate will be 3.7%, 0.2% lower than the estimation (3.9%) made in July. Besides the extended influences brought by the US-China trade war, the reasons for such decrease also include currency shock in the emerging markets, the price fluctuation of Iranian oil and weak economic performances of the euro area, etc. All of the above may be the factors that affect the macro-economy from 2019 to 2020.

The driving force of Taiwan’s economy may be influenced by disturbance of the escalating US-China trade war that poses uncertainty in the global economy. The estimated economic performance from 2018 to 2019 is weak, and areas around the world have almost come to consensus that the estimated economic growth in 2019 may be lower than that of in 2018. However, the US-China trade war brings not only bad news to Taiwan. The benefits Taiwan may enjoy in the short term include the possibilities that orders may divert into Taiwan and some Taiwanese entrepreneurs' backflow from China. It may boost investment in Taiwan and economic growth. Nevertheless, weaker purchasing power will still bring certain impacts in the long term. Therefore, continuous attention still needs to be paid to trends in all countries.

After several merger and acquisition events happened in the industry, only a few renowned companies (such as Micron, SK Hynix and Samsung) still play as the suppliers of memory. In addition, high-level artificial intelligent servers bring more demand for memory. The increasing memory price in recent year is the result of the above phenomenon. All of the above is the key driving force of rapid growth in revenue. However, the quotation price of memory is less fixed and declining recently, attention still needs to be paid on whether memory assembly and testing could maintain high-level growth.

In 2018, the total revenue of Gartner<sup>2</sup> in the global semiconductor industry is US\$476.7 billion, an increase of 13.4% compared to that of in 2017. The forecast for revenue in 2019 is US\$488.9 billion with 2.6% year-over-year growth, a slight improvement compared to that of in 2018.

According to the assessment made by the Company, the supply of the memory market is still relatively tough. The high price of memory results from the high growth of the memory market. Additionally, since the memory price is predicted to be adjusted in 2019, the sales performance in the semiconductor market is expected to be slightly increased.

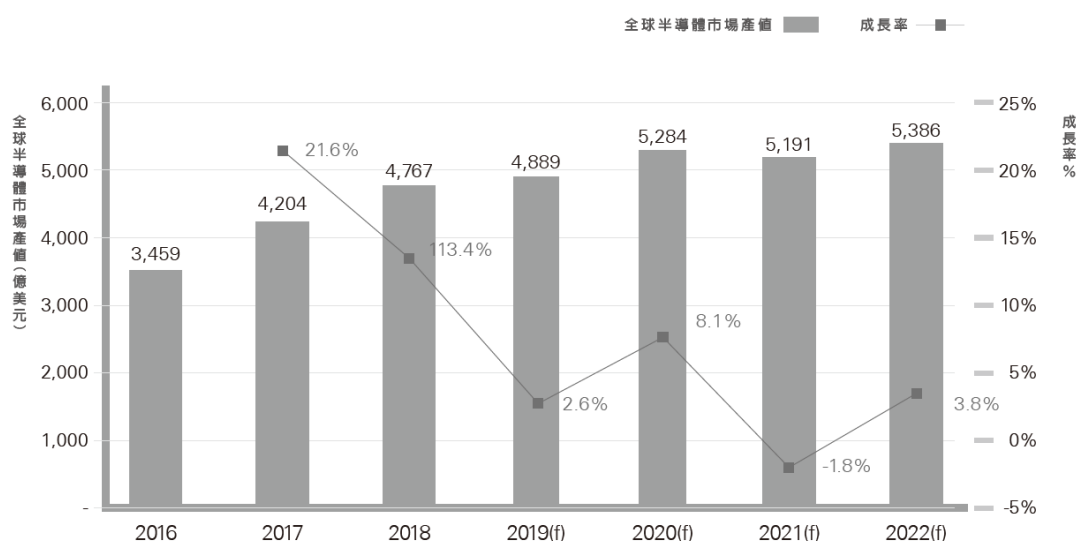
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<sup>2</sup> Source: Gartner: Semiconductor Forecast Database, Worldwide, 4Q18 Update , Nolan Reilly, Ben Lee et al., 24 December 2018

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## Global Semiconductor Market Forecast

### 全球半導體市場預測

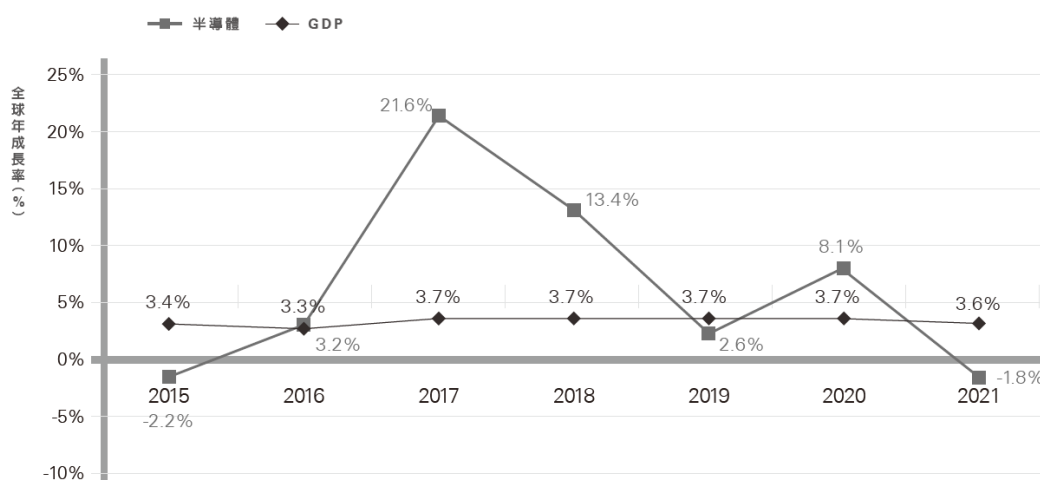


Source: Chart created by ASE Technology Holding Co., Ltd. based on Gartner Research: Semiconductor Forecast Database, Worldwide, 4Q18 Update, Nolan Reilly, Ben Lee et al., 24 December 2018.

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- 全球半導體市場產值 (億美元) : Global semiconductor market revenue (US\$100 million)
- 全球半導體市場產值 : Global semiconductor market revenue
- 成長率 : Growth rate
- 成長率(%) : Growth rate (%)

## Global GDP and Annual Growth Rate of the Semiconductor Industry



Source: IMF, ASE Technology Holding Co., Ltd. (2019/1)

- 全球年成長率 (%) : Global annual growth rate (%)
- 半導體 : Semiconductor

Market trends of the semiconductor industry in Taiwan: The IC industry in Taiwan enjoys very complete up-, mid- and downstream industry chains: from IC design, the upstream, to IC manufacturing and assembly and testing, the downstream. Such specialized business model makes Taiwan the third place around the world in the production value of the IC industry, following the United States and South Korea.

In 2018, the production value of the IC industry in Taiwan (including design, manufacturing and assembly and testing) reached NT\$2.6199 trillion, 6.4% year-over-year growth. The production value of IC design reached NT\$641.3 billion, 3.9% year-over-year growth; the production value of IC manufacturing is NT\$1.4856 trillion, an increase of 8.6% compared to that of last year. Among which, the foundry industry contributed NT\$1.2851 trillion, 6.6% year-over-year growth, and memory manufacturing industry contributed NT\$200.5 billion, increased significantly by 23.7% compared to that of in the last year; and, the production value of IC assembly and testing reached NT\$493 billion, an increase of 3.4% compared to that of in the last year. Among which, the production value of IC packaging reached NT\$344.5 billion, an increase of 3.5% compared to last year, while the production value of IC testing was NT\$148.5 billion, 3.1% year-over-year growth.

With the increasing demand for wafer level packaging (WLP) in end products, the orders for advanced assembly and testing in Taiwan's IC assembly and testing industry continued to increase in 2018. However, the demand for end products slowed down, the slow growth in upstream and midstream (i.e. IC design and manufacturing respectively) also brought impact on the downstream assembly and testing industry. After a series of merger and acquisition in the global assembly and testing industry, the world-class corporations continue to maintain their positions in the market. Under the serious competition among world-class corporations, the IC assembly and testing industry in Taiwan is expected to grow slightly. Therefore, the IC assembly and testing industry revenue reached NT\$493 billion in 2018, an increase of 3.4% compared to that of the last year.

The production values of Taiwan's IC design, manufacturing, and assembly and testing industry in 2018 are shown in the table below.

### The Revenue Forecast of Taiwan's Semiconductor Industry in 2019

Unit: NT\$ in 100 millions

|                                         | 2015   | 2016   | 2017   | 2018   | 2018 Growth Rate | 2019(e) |
|-----------------------------------------|--------|--------|--------|--------|------------------|---------|
| Taiwan IC Industry Revenue              | 22,640 | 24,493 | 24,623 | 26,199 | 6.4%             | 26,445  |
| Taiwan IC Design                        | 5,927  | 6,531  | 6,171  | 6,413  | 3.9%             | 6,675   |
| Taiwan IC Manufacturing                 | 12,300 | 13,324 | 13,682 | 14,856 | 8.6%             | 14,820  |
| Foundry                                 | 10,093 | 11,487 | 12,061 | 12,851 | 6.6%             | 12,943  |
| Memory Manufacturing                    | 2,207  | 1,837  | 1,621  | 2,005  | 23.7%            | 1,877   |
| Taiwan IC Assembly and Testing Industry | 4,413  | 4,638  | 4,770  | 4,930  | 3.4%             | 4,950   |
| IC Assembly                             | 3,099  | 3,238  | 3,330  | 3,445  | 3.5%             | 3,460   |
| IC Testing                              | 1,314  | 1,400  | 1,440  | 1,485  | 3.1%             | 1,490   |

Source: ITRI IEK, ASE Technology Holding Co., Ltd. (2019/02)

#### (2) Relationship between the Industry Upstream, Midstream, and Downstream

With the development of the global semiconductor industry, Taiwan has become an important cluster in the semiconductor industry, while China has become a important manufacturing base in the world. Therefore, the semiconductor industries in Taiwan and China are strongly connected to the demand for electronic products in the global market. The semiconductor industries of Taiwan and China have been under co-competition relations in recent years, complementing each other on a certain level. The

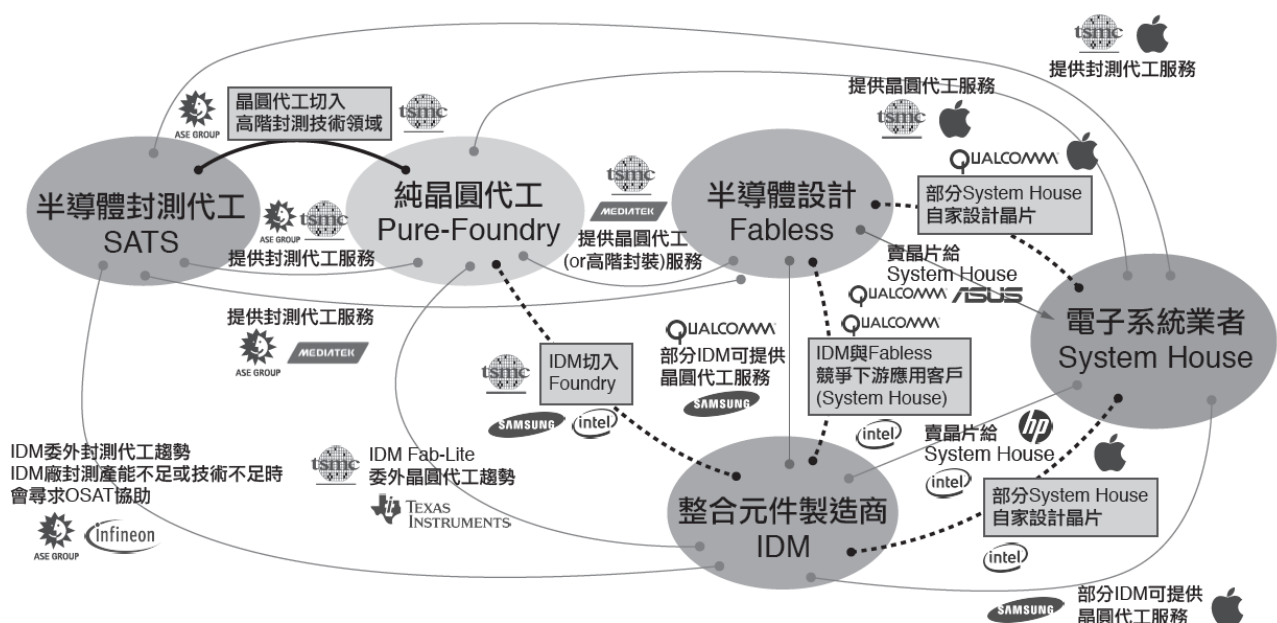
IC design companies in China release orders to Taiwan foundry factories and meanwhile, considering local supplies and business opportunities, companies in Taiwan put into production and sales in factories in China in terms of middle and low-class products.

By observing the up-, mid- and downstream supply chains in cross-strait semiconductor industries, it could be found that the structure of semiconductor industries in Taiwan and China are fundamentally different. In terms of the production value of the IC industry, Chinese companies focus on IC design of sub-industries. With the support of the nation, it continues to be a leading part of the IC industry in China, mostly supplying to domestic demand. As for the IC assembly and testing industry in China, local assembly and testing factories improve their technology and international orders by merger and acquisition to shorten their distances with world-class corporations. The rapid growth of assembly and testing industry in China mainly results from the vast market in China. Besides, with the support of local policies, the capacities of local manufacturers in the self-manufacturing wafer are improved, so as to satisfy the demand of semiconductor in the local market.

On the other hand, Taiwanese companies pay more attention to IC manufacturing of sub-industries, including wafer manufacturing and IC assembly and testing. While Taiwanese IC manufacturers move towards thinner line width and more advanced manufacturing technology, IC manufacturing in Taiwan continues to grow.

The overview of the industry shows that the global semiconductor industries are in co-opetition relations. Assembly and testing industry in Taiwan is well aware of where the market is and co-opetition is the foundation of the industry. In the future, with applications of semiconductor becoming more diversified, the quantitative and qualitative changes in assembly and testing industry have started. In the face of competitors from China and other areas, Taiwanese companies shall make good use of the flexibility in the semiconductor industry chains in Taiwan.

## Coopetition Relationships in the Secondary Semiconductor Industry



Source: ITRI IEK. (2017/11)

- IDM 委外封測代工趨勢：The OSAT trend of IDM companies
- IDM 廠封測產能不足或技術不足時會尋求 OSAT 協助：IDM companies facing insufficient capacity or technology would seek help from OSAT companies
- 晶圓代工切入高階封測技術領域：Foundries entering the field of high-level assembly and testing
- 提供封測代工服務：Provision of packaging, testing, and foundry services
- IDM 切入 Foundry：IDM companies entering the foundry industry
- IDM Fab-lite 委外晶圓代工趨勢：The OSAT trend of fab-lite IDM companies
- 提供晶圓代工 (or 高階封裝) 服務：Provision of foundry service or high-level packaging service
- 部分 IDM 可提供晶圓代工服務：Provision of foundry service from some IDM companies
- 提供晶圓代工服務：Provision of foundry services
- 部分 System House 自家設計晶片：Some electronic system houses design their own IC
- 賣晶片給 System House：Sale IC to electronic system houses
- IDM 與 Fabless 競爭下游應用客戶 (System House)：IDM companies and fabless manufacturers compete for downstream customers such as electronic system houses

The semiconductor industry, no matter in terms of the production value of export, added value, employment or related benefit in the industry, continues to be the core supporting Taiwan's economy, and it could be considered as one of the national treasures. The industry is the most crucial link to the future artificial intelligence system and various IoT application, and it is also the most important pillar and foundation for the government to promote industrial innovation. In order to promote the 5+2 Industrial Innovation Plan, the government has initiated various plans, such as Smart Machinery, Asia Silicon Valley, Green Energy, Biomedical, Defense, High-value Agriculture, and Circular Economy. All of the above innovation plans require an advantage in the semiconductor industry. By combining the semiconductor industry with the 5+2 Industrial Innovation Plan, a smart ecosystem is established, becoming one of the cores to boost industrial growth of the next generation and a driving force to create economic growth.

### The close relationship between the development of semiconductors and innovative industries

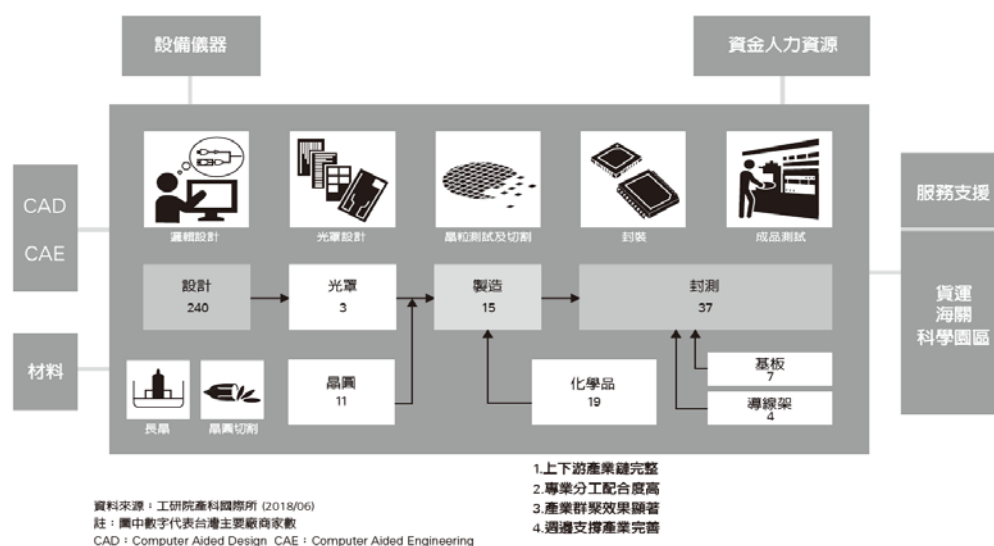


Source: ITRI IEK. (2018/06)

- 5+2 產業創新產官學研大推動：The 5+2 Industrial Innovation Plan promoted by the government-industry-university-institute alliance
- 應用半導體優勢連結 5+2 產業創新計劃形成智慧系統生態體系：Utilizing the advantage of semiconductor with the 5+2 Industrial Innovation Plan to form the ecosystem of smart systems
- 智慧系統與各種物聯網應用：Smart Systems and IoT Applications
- 亞洲矽谷：Asian Silicon Valley
- 智慧機械：Intelligent Machinery
- 綠能科技：Green Energy
- 生技醫療：Biomedicine
- 國防產業：National Defense
- 新農業：New Agriculture
- 數位經濟：Digital Economy
- 循環經濟：Circular Economy
- 智慧車：Smart Car
- 無人機：Unmanned Aerial Vehicle
- 機器人：Robot
- 穿戴裝置：Wearable Device
- 半導體產業：Semiconductor Industry
- IC 設計產業：IC Design Industry
- 晶圓代工產業：Foundry Industry
- 記憶體產業：Memory Industry
- IC 封測產業：IC Assembly and Testing Industry

According to the statistics concluded by Industrial Technology Research Institute in terms of the number of companies in semiconductor industry, there are 240 companies of IC design companies in Taiwan, 15 wafer manufacturers, 37 assembly and testing companies, 3 photomask companies, 7 substrate companies, 4 lead frame manufacturers, 11 wafer materials manufacturers and companies of various application in assembly. The relations of the up-, mid- and downstream industry chains are inseparable and intertwined, helping customers launch more up-to-date products and improve the competitiveness of cost. It is the reason why Taiwan plays a leading role in the semiconductor industry. In the supply chain of the semiconductor industry, the assembly and testing business of the Group mainly focuses on the assembly and testing (i.e. midstream) and supply of packaging materials (i.e. downstream). The Group provided semiconductor manufacturing service such as wafer assembly and testing, and the wafer is mostly supplied by world-renowned semiconductor companies which maintain good long-term relations with the Company. In addition, the Group improves itself by forming strategic alliances with partners to implement vertical and horizontal division of labor.

### The structure of Taiwan's semiconductor industry



Source: ITRI IEK (2018/06)



Note: The number in the diagram represents the number of major companies in Taiwan

CAD : Computer Aided Design    CAE : Computer Aided Engineering

- 材料：Materials
- 設備儀器：Equipment
- 資金人力資源：Funding and Human Resources
- 服務支援：Service and Support
- 貨運海關：Customs
- 科學園區：Science Park
- 設計：Design
- 光罩：Photomask
- 製造：Manufacturing
- 封測：Assembly and Testing
- 晶圓：Wafers
- 化學品：Chemicals
- 基板：Substrate
- 導線架：Lead Frames
- 長晶：Crystal Growth
- 晶圓切割：Wafer Slicing
- 上下游產業鏈完整：Complete Industry Chain from Upstream to Downstream
- 專業分工配合度高：Work Specilization and High Co-operation
- 產業群聚效果顯著：Significant Industrial Cluster Effect
- 週邊支撐產業完善：Well-Established Peripheral Supporting Industries

### (3) Development trends of the product

Mobile devise has been a important pillar in supporting the semiconductor industry, bringing a series of force to drive growth in related industries. In this era when everyone holds at least one mobile devise, the demand for smartphones has slowed down, making the growth of the semiconductor industry remain in the plateau period. Assembly and testing industry is facing the same situation. Therefore, finding the next driving force has become a more than important task.

The trend in the world has moved from computers and smartphones to IoT and AIoT, urging the electronic system to develop toward the intelligent direction. The semiconductor demand in such a system is therefore growing. In the future, all of the products that bring high-level growth in semiconductor will be related to AI.

With the applications of IoT, AI, Machine Learning, Mobile Communications (5G), High-Performance Computing, Virtual Reality/Augmented Reality, Automotive Electronics and Smart Factory/Medical System, the trend that IoT combined with AI and 5G have been penetrated every corner, raising the demand of advanced assembly and testing. While the demand of consumers for quality of the mobile device is raising, the suppliers are trying their best to produce portable devices with smaller size and more diversified functions. Suppliers must fill in more chips in limited space. Not only do IC manufacturers continue to develop advanced scaling technology, but also assembly and testing suppliers follow the trend to launch advanced assembly and testing technology to satisfy the demand of the market. On the whole, the production value of Taiwan IC assembly and testing reached NT\$493 billion in 2018, an increase of 3.4% compared to that of in 2017.

The three prominent themes of CES 2019 were (1) connectivity: commercializing 5G, (2) intelligence: AI application enters the mass market, and (3) experience: upgrading immersive experience. It is foreseeable that 5G will be commercialized in 2019, and it will be firstly served in vertical industries (such as audio/video, medical industry), not mass market. The vertical industries are able to speed up the development with a larger bandwidth. As for AI, the application of voice assistant will enter the mass market in 2019, and there will be potential demands for the technology of far-field, noise canceling, multi-user and voice print. The technology

of immersive experience will continue to make breakthroughs in visual technology and multisensory integration, and the application of immersive experience also expands from game application to B2B virtual market, such as medical application and training course.

With the growing interests in AI and HPC, the demands for FPGA, GPU and AI wafer (NPU) are increasing. In addition, the price of memory and penetration rate of advanced assembly and testing technology are both raising, bringing up the demands of the corresponding advanced manufacturing processes, shipment and unit price of products. In the era of AIoT and 5G, with the rise of new types of application, the market of IC industry after 2018 will move towards computation of instant and massive information. In such an era, the technology of multi-tasking, high-speed execution and access and low power consumption will be more prominent than ever, dominating the development and changes of the future IC manufacturing industry.

Furthermore, the percentage of the cost of automotive semiconductor to the entire vehicle will be raised from 3% to 10% at least. The global vehicle market is influenced by the fluctuation of the economy, and there might not be significant growth in the total amount of demands. However, with the automotive electronization, new energy vehicle and autonomous vehicles confirmed to be the mid- and long-term directions, the demands for CMOS image sensor, mid and high voltage power devices and various logic chips for the Internet of Vehicles will be increasing. Suppliers of related industries are positive about the business opportunities which will be brought by smart vehicle with environment sensing system, self-driving and advanced driver assistance system in the future. Furthermore, the smart vehicle in the future will also include various functions, such as AI, communication, and entertainment. With highly integrated assembly and testing technology and high-level safety standards, the IC manufacturing of semiconductor will integrate various sensor technology, such as image sensor, environment sensor, and controller, to realized multiple demands for functions in the smart vehicle.

After 2018, the new sources of demands for IC manufacturing industry are AI, IoV and wireless high-speed transmission (i.e. 5G). The new applications will replace consumer electronics to be the driving force of the next generation. Among which, applications related to AI are the most popular. The actual products of IoT are mainly wearable devices with innovative appearances, small size, and edge computing ability. Therefore, the focuses of future development will be CPU with low power consumption and high-speed computing ability; GPU or FPGA chip design and manufacturing; and process integration of radio frequency device, sensors of all sorts, MEMS, memory, multi-chips hetero-integration of logic IC. Through developing hetero-integration technology, the existing chip design is integrated with various functions to achieve horizontal integration. When the manufacturing process of semiconductor reaches its limit, the technology development in future 30 years will be a test of hetero-integration technology and emerging components (such as quantum and photon), in the hope of reaching the vision of More than Moore's Law in the future.

In the future, the trend in advanced assembly and testing technology will be large outline packaging and higher I/O density. Technologies that have developed to advanced level include SiP, Fan-out packaging, etc. Under the demands of higher I/O density and integration of multi-function chips, to meet the demand of end products, SiPs that integrated to the substrate and hetero/homo-integration made by Fan-out and silicon interposer packaging will continue to develop. In the future

when more applications are combining AI and AIoT, chip scale packaging and hetero/homo-integration will continue to play important roles in the assembly industry of end electronic products.

The trends of development for some products are as follows:

- Integration of diversified functions of end electronic products:
  - High-speed computation ability (3D game and audio/video of multimedia)
  - Multiple functions (including audio/video of multimedia and communication ability of wireless transmission)
  - Large memory capacity (saving audio/video of multimedia)
  - Energy saving and environment-friendly (low demand for power and non-use of hazardous substances)
  - Smaller size: lighter, thinner and shorter (portable device)
- Electronic products are moving towards smaller size and multiple functions. Therefore, the Company will continue to develop SiP Module, 3D IC, higher I/O density and miniaturization.
- Increasing needs for advanced assembly: with the structure of chips getting more complex and higher I/O density of SoC, chips require quality heat dissipation and stable electrical characteristic. Hence, the advanced technology in future chips packaging industry will continue to develop, following items listing below:
  - Copper Pillar Bumps in Flip-chip Package
  - Through Silicon Via (TSV)
  - Integrated Passive Device
  - Ultra-thin wafer grinding and packaging technology
  - 2X/1X/7/5nm wafer assembly and testing technology
  - Fan out wafer level packaging technology
  - Slim and high bandwidth packaging and stacking technology
  - System-in-Package (SiP)
  - 2.5D/3D advanced integrated packaging technology

(4) Competition in the industry

Among the renowned assembly and testing companies around the world, ASE and SPIL play the leading roles in Taiwan, while the top player in the U.S. is Amkor. To make its products more diversified and improve the growth momentum of revenue, Amkor continues to acquire J-Device, a Japanese company, and Nanium, a Portuguese company providing fan-out packaging service. The top suppliers in China are Jiangsu Changjiang Electronics Technology Co., Ltd, Tongfu Microelectronics Co., Ltd. and Huatian technology (xi 'an) co., LTD. The growth rate of assembly and testing companies in China had passed companies in Taiwan and the U.S. since 2013. In 2015 and 2016, the cross-nation acquisition made by the top three Chinese assembly and testing companies started to make a contribution. In 2017, most of the growth in semiconductor assembly and testing industry around the world came from China.

However, the revenue of assembly and testing companies in Taiwan had gained back its growth momentum in 2018. Compared to the 2.8% growth rate in 2017, the growth rate of production value in assembly and testing industry in 2018 reached

3.4%. The declining quarterly revenue of Amkor and single-digit growth of Jiangsu Changjiang Electronics Technology Co., Ltd and Tongfu Microelectronics Co., Ltd. show that the growth momentum of assembly and testing companies in the U.S. and China is decreasing, and the growth momentum of Taiwanese assembly and testing companies is increasing. Semiconductor assembly and testing industry belong to the manufacturing industry. The declining revenue performances of Jiangsu Changjiang Electronics Technology Co., Ltd, Tongfu Microelectronics Co., Ltd. and Huatian technology (Xi'an) co., LTD. are clearly results of the US-China trade war. The trade war has made the assembly and testing companies in the U.S. and China suffer declining growth rate, and orders of assembly and testing are transferred to Taiwanese companies. Due to the above reasons, the performance of Taiwanese assembly and testing companies enjoy growth rate higher than the international average. Since the fierce competition in the development of advanced assembly technology, it is estimated that the top four assembly and testing companies of the world will still be cautious in capacity expansion in 2019.

### 3. Electronics Manufacturing Services :

2018 reports from the professional market research organization depict that the 2018 global electronic manufacturing service revenue will reach 505 billion US dollars. It is estimated that the global electronic manufacturing service revenue can reach more than 673 billion US dollars in 2022, and the compound growth rate is about 7.4% from 2017 to 2022. The overall market is showing a steady growth trend.

#### 5.1.3 Research and Development

The Group R&D Expenses during the Current Fiscal Year up to the Date of Publication of the Annual Report:

| Unit: NT\$ in thousands                         |             |             |                                |
|-------------------------------------------------|-------------|-------------|--------------------------------|
| Item \ Year                                     | 2017        | 2018        | 2019 up to the end of February |
| Operating Revenue                               | 290,441,208 | 371,092,421 | 59,295,417                     |
| R&D Expenses                                    | 11,746,613  | 14,962,799  | 2,585,131                      |
| Percentage of R&D Expenses to Operating Revenue | 4.04%       | 4.03%       | 4.36%                          |

#### 1. Investment :

The Company's primary long-term investment and the company has no need for R&D.

#### 2. Assembly and Testing:

##### (1) Successful Development of Technologies or Products:

##### A. Successful Development of New Products

##### Assembly Technology

| New Package |                                                          |
|-------------|----------------------------------------------------------|
| 3D SiP      | 1. 2.5D Through Silicon Via Interposer System in Package |
|             | 2. 3D Through Silicon Via Stacking System in Package     |
|             | 3. aMAP Flip Chip PoP                                    |
|             | 4. aMAP Wire Bond PoP                                    |
|             | 5. Integrated Passive Device Integrated QFN Package      |
|             | 6. Embedded Active/ Passive Laminate Substrate           |

| New Package                   |                                                                             |
|-------------------------------|-----------------------------------------------------------------------------|
|                               | 7. Fine Pitch Die-to-Wafer Stacking Technology                              |
|                               | 8. 6L SESUB_Glass Die Packaging Challenge & Solution                        |
| OEP                           | 1. High Power LED Package                                                   |
|                               | 2. eCompass Magnetic Sensor Package                                         |
|                               | 3. Si-Photonic Packaging                                                    |
| WLCSP                         | 1. Integrated Resistor Passive Device                                       |
|                               | 2. 2-layer PI, Cu-Plated RDL Technology                                     |
|                               | 3. Bonded Wafer Thinning Technology                                         |
|                               | 4. BoT aCSP                                                                 |
|                               | 5. RDL 2/2um                                                                |
|                               | 6. WLCSP Thin Die Development                                               |
|                               | 7. FOPoP PKG Development                                                    |
| Flip Chip                     | 1. 7 nm Cu/ELK Lead Free FC Solution                                        |
|                               | 2. 40 um Fine Pitch FC & WB Hybrid Stacked Chips Package                    |
|                               | 3. Ultra High Density Substrate Strip                                       |
|                               | 4. Flip Chip Package with Mold Only Process                                 |
|                               | 5. Flip Chip Through Mold Via Package                                       |
|                               | 6. 1 Layer Embedded Trace Package                                           |
| Wire Bond Package             | 1. 16 nm Cu/ULK Wafer Wire Bond Package                                     |
|                               | 2. Cu Wire Bond BGA/ Lead Frame Package                                     |
|                               | 3. Cu Wire Pad to Pad Bonding                                               |
|                               | 4. Low Cost & High Performance aS3 / aQFN                                   |
|                               | 5. FC QFN For ATV                                                           |
|                               | 6. High Thermal HS Evaluation                                               |
|                               | 7. aEASI P2                                                                 |
|                               | 8. Mobile DRAM                                                              |
| MEMS Packaging                | Wafer Level MEMS Packaging                                                  |
| Wireless Module               | 1. BTLE+Accelerator SiP Module Application Solution                         |
|                               | 2. Wi-Fi 11n 2x2 Channel SiP Module Total Solution                          |
|                               | 3. Irregular FC Cu-Pillar PA SiP Module Solution                            |
|                               | 4. Conformal/ Compartment EMI Shielding Solution                            |
|                               | 5. Flexible Substrate & Assembly Technology                                 |
|                               | 6. Antenna & Assembly Technology                                            |
|                               | 7. Ultra Thin Double Side Wireless Module Technology                        |
| Wireless Communication Module | 1. Highly Integrated Multi- Modes Multi-Bands Communication Module Solution |
|                               | 2. Highly Integrated SiP Module Packaged LTE Module Solution                |
|                               | 3. MCU Wireless Connection Module Total Solution                            |
|                               | 4. 5G AiP Development                                                       |
| Bumping                       |                                                                             |
| Plating                       | Low Ag of Sn/Ag Lead-Free Bump Plating Technology                           |

## New Test Product

| New Test Product           |                                                                |
|----------------------------|----------------------------------------------------------------|
| Wafer Probing              | 1. High Channel Density 4-Wire VI Source Module                |
|                            | 2. Digital I/O & PPMU Module                                   |
|                            | 3. Fiber Module Control Card                                   |
|                            | 4. Embedded-die Substrate Open/Short Tester                    |
|                            | 5. Multiple Wafer Stacked Map Analysis Tool                    |
|                            | 6. 12A High Current VI Source Module                           |
|                            | 7. 200MHz High Speed Pattern Module                            |
| Final Testing              | 1. Test Data Analysis System                                   |
|                            | 2. Yield Monitor System                                        |
|                            | 3. Open/Short Tester Compact Module                            |
|                            | 4. Open/Short Tester                                           |
|                            | 5. Online Real-time Fail Bin Analysis Report Generation System |
|                            | 6. Power management SiP with SESUB Technology                  |
|                            | 7. LPWAN SiP                                                   |
|                            | 8. Multi-Functions IoT SiP                                     |
|                            | 9. Optical Sensing SiP                                         |
|                            | 10. Highly Integrated RF FEM                                   |
| Test Equipment Development | 1. High Density Channel Sharing Board                          |
|                            | 2. High Swing Time Measurement Module                          |
|                            | 3. Multi-Channel RF-VNA Integrated System                      |

## Test Technology

| New Test Technology |                                                 |
|---------------------|-------------------------------------------------|
| Final Testing       | 1. SiP ARM+Memory Modules SLT Technology        |
|                     | 2. SiP GaN Power Module Testing Technology      |
|                     | 3. SiP Computer Audio Module Testing Technology |
|                     | 4. CIS Testing Development                      |
|                     | 5. Facial Recognition Sensor Testing Solution   |

## B. Successful Development of New Technology

## Assembly Technology

| Advanced Technology |                                                        |
|---------------------|--------------------------------------------------------|
| 3D SiP              | 1. 2.5D TSV Stacking                                   |
|                     | 2. 3D TSV Stacking                                     |
|                     | 3. Integrated Passive Device                           |
|                     | 4. Thin Core FC PoP Technology                         |
|                     | 5. Fine Pitch Die-to-Wafer Stacking Technology         |
|                     | 6. 65 nm SRAM TSV Qualification                        |
|                     | 7. Compartment Shielding Technology                    |
|                     | 8. Selective Molding Solution                          |
|                     | 9. SiP COW                                             |
|                     | 10. Wafer Level MEMS with Exposed Die & Solder Balls   |
|                     | 11. Pressure Sensor                                    |
|                     | 12. 2.5D IC 75 mm x 60 mm Size FCBGA                   |
|                     | 13. FC-PoP                                             |
|                     | 14. Flip Chip Enhanced PoP(Solder Bump/Cu Pillar Bump) |

| Advanced Technology           |                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------|
|                               | 15. PoP with Coreless Substrate Technology                                           |
|                               | 16. High Bandwidth PoP                                                               |
|                               | 17. 9 Dices-Stacked                                                                  |
|                               | 18. MCM-WB-SFCCSP (Cu Pillar Bump/ Cu Wire Bonding)                                  |
|                               | 19. 3D SiP Module with Double Side Assembly and One Time Molding Technology          |
|                               | 20. Ultra Thin Double Side Molding SiP PKG Technology                                |
|                               | 21. Thermal Enhanced Double Side SiP PKG                                             |
|                               | 22. F2F(Face to Face) Bonding FCCSP                                                  |
|                               | 23. FO-PoP(Fan Out PoP) with LSC(Land Side Capacitor) Technology                     |
|                               | 24. FC Enhanced PoP with LSC(Land Side Capacitor)                                    |
|                               | 25. FC Bare die PoP with LSC(Land Side Capacitor)                                    |
|                               | 26. FC Exposed Die Enhance PoP with Coreless Substrate With LSC(Land Side Capacitor) |
|                               | 27. FO-SiP(Fan Out SiP)                                                              |
|                               | 28. SiP Module with Stack Die on Passive Technology                                  |
|                               | 29. 2.4GHz Antenna in Package with Selective EMI Coating                             |
|                               | 30. Integrated Passive Devices                                                       |
|                               | 31. Partial Side Molding                                                             |
| Wireless Communication Module | 1. EMI Conformal Shielding                                                           |
|                               | 2. Double Sided Molding SiP Module                                                   |
|                               | 3. Compartment Shielding Technology                                                  |
|                               | 4. Selective Molding Solution                                                        |
|                               | 5. Selective Shielding Technology                                                    |
| OEP                           | 1. Pico Projector Microdisplay Qualification                                         |
|                               | 2. High Aspect Ratio TSV Plating Technology                                          |
|                               | 3. Low Cost TSV Technology                                                           |
| WLCSP                         | 1. Embedded Active Si Substrate                                                      |
|                               | 2. 50 um Wafer CMP Grind Technology for 200mm TSV Wafer                              |
|                               | 3. 50 um Wafer Carrier Release Technology for 200mm TSV Wafer                        |
|                               | 4. Reliability Research and Optimization of Large Size (8x8mm) for WLCSP             |
|                               | 5. RDL LF Bump                                                                       |
|                               | 6. RD Cu Pillar                                                                      |
|                               | 7. IR Through BSL                                                                    |
|                               | 8. Advanced BSL                                                                      |
|                               | 9. Advanced Laser Dicing                                                             |
|                               | 10. aWLP/II InFO-Like Class InFO Structure                                           |
|                               | 11. 4-layer Polymer,Cu-Plated RDL Technology                                         |
|                               | 12. FOCoS                                                                            |
|                               | 13. Large Size WLCSP                                                                 |
|                               | 14. Molded Type WLCSP                                                                |
|                               | 15. FO-WLP                                                                           |
|                               | 16. FO-MCM                                                                           |
|                               | 17. 5um Si-Interposer Technology                                                     |
|                               | 18. 8"/12" Ball On Trace WLCSP                                                       |
| Flip Chip                     | 1. Fine Pitch NCF Under-Fill Technology                                              |
|                               | 2. 40 um Pitch FC Solution for 28 nm ELK Wafer                                       |
|                               | 3. 300mm Wafer 50um Backgrind Technology                                             |
|                               | 4. Laminated FC CSP                                                                  |
|                               | 5. 28nm Wafer Tech with Embedded Pattern Plating                                     |
|                               | 6. High Frequency Wide Stack Packaging Technology                                    |

| Advanced Technology |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
|                     | 7. Wafer-level Flip-Chip Package Product Bump Pitch Fine Structure Development Research Project |
|                     | 8. 2.5D Advanced IC Assembly                                                                    |
|                     | 9. Silver Alloy Wire for Hybrid Flip Chip BGA Technology                                        |
|                     | 10. 3 mm x 3 mm Size FCCSP                                                                      |
|                     | 11. FC-ETS (Embedded Trace Substrate) With LSC(Land Side Capacitor)                             |
|                     | 12. FC-MISBGA (Molded-Interconnection-System BGA)                                               |
|                     | 13. Recon (Reconstitution) FCCSP                                                                |
|                     | 14. Recon (Reconstitution) Exposed Die FCCSP                                                    |
|                     | 15. FCCSP with TCB (Thermal Compression Bonding)Technology                                      |
|                     | 16. FCCSP with LSC(Land Side Capacitor)                                                         |
|                     | 17. Extreme-Thin FCCSP                                                                          |
|                     | 18. 75 mm x 75 mm Large Size FCBGA                                                              |
|                     | 19. 11 mm x 11 mm Small Size FCBGA                                                              |
|                     | 20. FCBGA with 60GHZ Antenna                                                                    |
|                     | 21. TIM(FCBGA with Ultrahigh Thermal Performance TIM(Thermal Interface Material))               |
|                     | 22. FCBGA with EPS (Embedded Passive Substrate)                                                 |
|                     | 23. FCBGA with Low Loss Organic Substrate                                                       |
|                     | 24. FCBGA with LSC(Land Side Capacitor)                                                         |
|                     | 25. FCBGA with TCB (Thermal Compression Bonding) Technology                                     |
|                     | 26. 65mm x 65mm FCBGA with Thin Core Substrate                                                  |
|                     | 27. FO-MCM FCBGA                                                                                |
|                     | 28. Ultra-Thin CSP                                                                              |
|                     | 29. FC-QFN (Cu Pillar Bump)                                                                     |
|                     | 30. Flip Chip Finger Print Sensor Packaging Technology                                          |
|                     | 31. Advanced Wafer Thinning Technologies - 25 um for 8" & 12" Wafer                             |
|                     | 32. Advanced Wafer Thinning Technologies - 60 um for 12" Bumping Wafer                          |
|                     | 33. Flip Chip Tech. on 20/16/14/10nm ELK wafer                                                  |
|                     | 34. Flip Chip With 130um Pitch Lead Free Bumping                                                |
|                     | 35. 40um Pitch Cu Pillar Bumping                                                                |
|                     | 36. TCB(Thermo-Compression-Bonding) Technology                                                  |
| Wire Bond Package   | 1. 20 nm Ultra Low K Cu Wafer Wire Bond Package                                                 |
|                     | 2. 18 um Cu Wire Bond Technology                                                                |
|                     | 3. Cu Wire Pad to Pad Bonding                                                                   |
|                     | 4. Cu Wire Bond Packaging Technology                                                            |
|                     | 5. Development and Application of Substrates for Embedded                                       |
|                     | 6. FCQFN Development                                                                            |
|                     | 7. Fine Pitch Wire Bonding Technology                                                           |
|                     | 8. Double-Sided SMT Packaging Technology                                                        |
|                     | 9. Pressure Sensor Packaging Technology                                                         |
|                     | 10. Single Layer Substrate Package                                                              |
|                     | 11. EHS-TFBGA                                                                                   |
|                     | 12. MR(Multi-row-Routable)-QFN                                                                  |
|                     | 13. Wire Bond Finger Print Sensor Packaging Technology                                          |
|                     | 14. Wire Bonding Tech. on 28/20nm ULK/ELK Wafer                                                 |
|                     | 15. 45um Pitch, Linear Cu Wire Bonding                                                          |
| Green Package       | 1. QC080000 Green System Certification                                                          |
|                     | 2. RoHS Certification on Chemical Lab                                                           |



| Advanced Technology |                                                |
|---------------------|------------------------------------------------|
| Bumping             |                                                |
| Plating             | 1. 40 um Fine Pitch Cu Pillar Bumping          |
|                     | 2. High Aspect Ratio Cu Pillar Bumping Plating |
|                     | 3. 15um TSV Filling Plating                    |
|                     | 4. Fan-Out Package for Lead-Free Bump          |
|                     | 5. Lead Free (SnAg, SnCu) Wafer Bumping        |
|                     | 6. 100um Pitch Eutectic Bump                   |
|                     | 7. 100um Pitch Lead Free Bump                  |
|                     | 8. 40um Pitch Cu Pillar Bump                   |
|                     | 9. Bumping on 16/14/10/7nm ULK/ELK Wafer       |

## Test Technology

| New Test Technology        |                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------|
| Wafer Probing              | 1. SiP - GaN Power Wafer Probing Testing Technology                                               |
|                            | 2. WLCSP RF-Switch High Efficiency Parallel Test of Multi-Channels' Resistance of WLCSP RF-Switch |
|                            | 3. Low Cost PMIC Wafer Probing Testing Technology                                                 |
|                            | 4. 5G IC Wafer Testing                                                                            |
| Final Testing              | 1. SiP - Product Application Testing Technology                                                   |
|                            | 2. SiP-EFA/Function Detectability                                                                 |
|                            | 3. Design FMEA(SiP Design Failure Mode and Effect Analysis)                                       |
|                            | 4. SiP / SLT "System Level Testing" Technology                                                    |
|                            | 5. SiP - GaN Power Product Application Testing Technology                                         |
|                            | 6. ALS+Prox.Sensor Test Solution                                                                  |
|                            | 7. FPCB Module Test Solution                                                                      |
|                            | 8. Test Optimization of 802.11ac Transceiver                                                      |
|                            | 9. Touch Sensor IC High UPH and Low Cost O/S Test Solution                                        |
|                            | 10. Auto-Learn Embedded IC & Generate the Open/Short Test Program Technology                      |
|                            | 11. PMIC High UPH Test Methodology                                                                |
|                            | 12. Wearable Device SiP Module Test Technology                                                    |
|                            | 13. Auto-Learn Open/Short Testing Technology                                                      |
|                            | 14. Auto-Learn Leakage Testing Technology                                                         |
|                            | 15. mmWave AiP Function Test Solution                                                             |
|                            | 16. Low-Cost SiP Test Platform                                                                    |
|                            | 17. In-Process SiP Test Solution                                                                  |
|                            | 18. Geometric Optical Sensors Test Solutions                                                      |
|                            | 19. Automatic Strip-Level Functional Tests                                                        |
|                            | 20. Bitcoin Machine CPU IC Product Testing                                                        |
|                            | 21. Advance Process, 3D IC FC Process Verify Measurement                                          |
| Test Equipment Development | 1. Asynchronous Command Sending Auto-Testing Control System                                       |
|                            | 2. Multiple Functions and Modules Integration System                                              |
|                            | 3. Programmable Combo Source-Meter Control Interface                                              |
|                            | 4. Cascade Data-Stream Extended Control Unit in the Integration Core System                       |
|                            | 5. Programmable I/O Channels Phase Delay Technology                                               |
|                            | 6. High Performance Digital Testing Module Development                                            |
| Test Data Analysis         | 1. Substrate Center of Gravity Offset Detection Algorithm                                         |

| New Test Technology |                                                                                                                                     |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|                     | 2. Fast Shmoo- Nearby Searching Algorithm                                                                                           |
|                     | 3. Substrate Visualized Image Recognition Failure Detection Algorithm                                                               |
|                     | 4. Substrate SECS/GEM Recipe & SECSGEM Automation System for Recipe Ensuring & Production Data Storing at Substrate Cu Plating Line |
|                     | 5. IV-Curve Generator & Analysis Tool                                                                                               |
|                     | 6. BGA Ball Fail Highlight Tool                                                                                                     |

#### Other Technology

| New Test Technology |                                        |
|---------------------|----------------------------------------|
| Wafer Saw           | 1. SD(Stealth Dicing) Laser Technology |

### 3. Electronics Manufacturing Services

#### (1) Successful Development of Technologies or Products:

##### A. Successful Development of New Products

|                        |                                                                                                              |
|------------------------|--------------------------------------------------------------------------------------------------------------|
| Wireless Communication | 1. WiFi SiP module 802.11 ac 2x2                                                                             |
|                        | 2. WiFi SiP module 802.11 ax 2x2                                                                             |
|                        | 3. UWB SiP module                                                                                            |
|                        | 4. Wi-Fi 11ac 2x2 Channel SiP Module Total Solution e                                                        |
|                        | 5. 3G data MODEM, alone with 3GPP evolution to meet requirement for machine-to-machine and IoT applications. |
|                        | 6. SOM, System on Module, IoT module                                                                         |
|                        | 7. Mobile Indoor 802.11ac Wave 2 AP with LTE Backhaul                                                        |
|                        | 8. High density, high performance 802.11ac W2 indoor AP                                                      |
| Storage & Computer     | 1. Intel 8th Generation Core Processors Commercial AIO Motherboard                                           |
|                        | 2. Stick PC                                                                                                  |
|                        | 3. Audio SiP                                                                                                 |
|                        | 4. NAS Tower Products                                                                                        |
|                        | 5. NAS Rack Density Products                                                                                 |
|                        | 6. Digital Media Player/Digital Sinage                                                                       |
|                        | 7. Security Computer                                                                                         |
|                        | 8. IoT gateway with TI & Intel solution                                                                      |
|                        | 9. Intel Thunderbolt3 Dock                                                                                   |
|                        | 10. Separately portable computing stick with pico projector                                                  |
|                        | 11. SiP hybrid module                                                                                        |
| Industrial Products    | 1. OM7 Hand-held POS Terminal                                                                                |
|                        | 2. LTE Android Rugged Smart Handheld Device                                                                  |
|                        | 3. Vehicle-Mounted Computer with x86 & ARM                                                                   |
|                        | 4. LTE System on Module, SOM                                                                                 |
|                        | 5. Wearable Terminal                                                                                         |
|                        | 6. Smart Badge                                                                                               |
|                        | 7. Ring Scanner                                                                                              |
|                        | 8. Personal Shopper                                                                                          |
| Consumer               | 1. Health-care wristband                                                                                     |

|                              |                                                                                                    |
|------------------------------|----------------------------------------------------------------------------------------------------|
|                              | 2. Stylus                                                                                          |
|                              | 3. Wireless Charger                                                                                |
| Car Electronics              | Center Stack Display                                                                               |
| Miniaturization & Automation | 1. Total SiP package module thickness 0.685mm                                                      |
|                              | 2. SMT component space 50um                                                                        |
|                              | 3. Mold clearance 60um                                                                             |
|                              | 4. SiP module size 3mmx5mm                                                                         |
|                              | 5. High density component and Thin thickness SiP package for Wearable/watch main board             |
|                              | 6. EMI shielding is the combination of surface shielding and compartment shielding for the package |

## B. Successful Development of Advanced Technology

| Advanced Technology          |                                                                                                                                                                                                                                                                   |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wireless Communication       | 1. Double Sided Molding SiP Module                                                                                                                                                                                                                                |
|                              | 2. Compartment Shielding Technology                                                                                                                                                                                                                               |
|                              | 3. Selective Shielding Technology                                                                                                                                                                                                                                 |
|                              | 4. Using molding under fill process technology to provide smaller module size for customer flexible applications.                                                                                                                                                 |
|                              | 5. System on Module(SOM) IoT module uses High Density SMT miniaturization technology, by integrating a majority of the system functions and also including the application processor, memory, power processing chip, and related wireless transmission functions. |
|                              | 6. noise isolation Technology                                                                                                                                                                                                                                     |
|                              | 7. RF on-board design                                                                                                                                                                                                                                             |
| Storage & Computer           | 1. Separately portable computing stick with pico projector                                                                                                                                                                                                        |
|                              | 2. Separately portable computing stick with pico projector                                                                                                                                                                                                        |
|                              | 3. NEBS, Network Equipment Building System                                                                                                                                                                                                                        |
|                              | 4. Integrate new Intel Thunderbolt3 technology, and meet standard USB Type-C design.                                                                                                                                                                              |
| Industrial Products          | 1. Rugged Hand-held device with water-proof and drop endurance mechanical design                                                                                                                                                                                  |
|                              | 2. World Wide LTE Android System on Module                                                                                                                                                                                                                        |
|                              | 3. LTE tuner antenan design                                                                                                                                                                                                                                       |
| Consumer                     | 1. AES, Active Electrostatic Solution                                                                                                                                                                                                                             |
|                              | 2. EMR, Electro Magnetic Resonance technology                                                                                                                                                                                                                     |
|                              | 3. MI, Magnetic Induction                                                                                                                                                                                                                                         |
| Car Electronics              | Anti- Sulphur (Vulcanization) structure of ceramic circuit substrate and manufacturing method.                                                                                                                                                                    |
| Miniaturization & Automation | 1. Jig saw street 0.25mm                                                                                                                                                                                                                                          |
|                              | 2. High frequency EMI Shielding Process Capability                                                                                                                                                                                                                |
|                              | 3. Mold clearance 60um                                                                                                                                                                                                                                            |

| Advanced Technology |                                                                |
|---------------------|----------------------------------------------------------------|
|                     | 4. MUF process component clearance less than 50um              |
|                     | 5. 80um narrow trench technology for EMI compartment shielding |
|                     | 6. Multi-layers sputtering for EMI shielding                   |
|                     | 7. SiP 6S AVI                                                  |
|                     | 8. 2nd Generation Test Common Platform                         |
|                     | 9. SiP Press Machine for Sputter                               |
|                     | 10. Auto Material Handling System                              |
|                     | 11. SiP Auto De-burr Machine                                   |
|                     | 12. SSD AVI Machine                                            |
|                     | 13. Auto Handler for SSD Advantest                             |
|                     | 14. VPD FCT Auto Handler Common Platform                       |
|                     | 15. Equipment Data Fetch and Transmission                      |
|                     | 16. Big Data Message Queue Communication                       |
|                     | 17. Big Data Storage                                           |
|                     | 18. Big Data Real Time Streaming Analytics                     |
|                     | 19. Data Real Time Broadcast                                   |

#### 5.1.4 Long-Term and Short-Term Business Development Plan

##### 1. Short-Term Development Plan

- Retain existing customers and attract more integrated device manufacturer (IDM) customers
- Enforce group production strategies and achieve the most advantageous deployment
- Obtain high-end packaging orders and increase profitability
- Improve resource utilization rates and reduce resource consumption and waste
- Upgrade manufacturing techniques for eco-friendly products and accelerate product innovations to increase business opportunities
- Conduct trial production and development to achieve mass production
- To satisfy most concerned items by target customers and win their market share.
- To develop technologies and products rapidly in line with market trends and speed up the time to market.
- To expand and to consolidate capacities at Taiwan and abroad continuously for the advanced assembly and test of productivity to satisfy the market growth trend.
- Maintain relationship with existing customers and develop new EMS / ODM clients
- Implement the Group's production strategy and achieve the optimum production configuration
- Improve resource allocation and utilization, and reduce resource consumption and waste
- Enhance production technology of environmentally friendly products and accelerate product conversion rate to enhance market opportunities

##### 2. Long-Term Development Plan

- Consolidate group resources and provide customers with more comprehensive services
- Improve cost structuring and offer customers more competitive prices
- Enforce customer segmentation, increase customer satisfaction, expand production

- scale and create cost advantages to make prices more competitive
- Assure technological leadership to increase market share
- Layout the new applications in line with the industrial development trends and continue the growth drive to ensure SPIL's leading position in the semi-conductor assembly industry.
- Adding Miniaturized and Solutions from the existing DMS (Design and Manufacturing Services) model, which means providing design and manufacturing services with miniaturization and solutions throughout the value chain process to become D(MS)<sup>2</sup>
- Improve cost structure and provide customers with competitive prices.

## 5.2 Market and Sales Overview

### 5.2.1 Market Analysis

The Group Sales by geographical area in 2018

Unit: NT\$ in thousands

| Region          | Sales Revenue | %      |
|-----------------|---------------|--------|
| USA             | 230,791,164   | 62.19  |
| Taiwan          | 45,630,792    | 12.30  |
| Europe          | 36,844,258    | 9.93   |
| Asia and others | 57,826,207    | 15.58  |
| Total           | 371,092,421   | 100.00 |

#### 1. Market Share(ASEH share of the global outsourced semiconductor assembly and test services market in 2018)

According to our 2018 consolidated assembly and test revenues, our share of world wide outsourced assembly and test market was around 25%.

Remark: 2018 world wide outsourced assembly and test market was estimated based on the publicly available revenues of assembly and test service providers and foundry back end business.

In 2018, the subsidiary USI OEM revenue was \$4,962.12 million US dollars, increasing by 14% since 2017, accounting for about 1% of the global EMS/ODM market in 2018 and maintains a stable market share.

Remark: The statistics of the global outsourced assembly and test market in the year of 2018 is based combined data from NVR 2018 analysis, and taking into account the public revenue information of the OEM industry.

#### 2. Supply-and-demand status and growth in future market:

According to the Industry, Science, and Technology International Strategy Center of the Industrial Technology Research Institute (ITRI), the estimated industry revenue of IC assembly and testing industry in Taiwan in 2018 reached NT\$493 billion, an increase of 3.4% from NT\$477 billion in 2017. The industry revenue of IC assembly in 2018 was estimated at NT\$344.5 billion, growing by 3.5% from the previous year (NT\$333 billion), and that of IC testing is NT\$148.5 billion, 3.1% increase from NT\$144 billion in 2017. In comparison, there appears to be insufficient momentum in the U.S. and Chinese markets. With respect to the prospects of the global backend Outsourced Semiconductor Assembly and Test (OSAT) industry trends, ITRI estimated that the Compound Annual Growth Rate (CAGR) of the global OSAT industry will be around 4.5% by 2022. Backend assembly and testing will not be the main source of profits for integrated device manufacturers (IDM). Therefore, the overall outlook

shows that the relationship between IDM and OSAT manufacturers will be more like partners than competitors. Of the entire advanced assembly and testing industry, FlipChip will generate the most production values, followed by Fan-In and Fan-Out packaging. From the viewpoint of growth rate, TSV, embedded chips, and Fan-Out are second to none, having a double-digit rate of increase. For the demand and production value of the global semiconductor market in 2019, please refer to the content of "Current Status and Development of the Industry" in the previous paragraphs.

The outsourcing demand for electronic products has been increasing globally. As the EMS service model matures and services enhance, the service scope of the global EMS market broadens and the total outsourced volume increases yearly. To satisfy the increasing demands of brand owners, the scope of EMS services is ever-expanding and gradually covers the higher end of the product value chain. This trend provides a wider development space for the manufacturers such as USI Inc. that are capable of product planning, designing, and R&D. According to market analysis and the Company's meta-analysis, the global EMS/ODM market remains to have a steady growth and has an annual growth rate of approximately 7% on average.

### 3. Core competence

In 2019, the overall semiconductor industry in Taiwan will continue to grow. In order to increase the overall market share and based on the faith of constant refinement, the Group strengthens and places emphasis on the internal operational mechanism and the enhancement of the capabilities of developing advanced technologies, in hopes of creating outstanding performance again. The competitive edges that we rely on are as follows:

- (1) Continuous technical development to ensure that the technologies and quality of the high-end products remain in a leading position.

To be in line with the model of semiconductor contract manufacturing industry chain, the Group's Assembly and Testing Business Group continues to head toward the development of high-end products, as key chip contract manufacturers such as TSMC and UMC do. The Group is able to make technical advances and achieve a win-win situation. In response to the market demands of increasing functionalities, down-scaling and optimization of cost-effectiveness of products and applications, we have been focusing on research into advanced assembly and testing technologies such as 2.5D & 3D IC, SiP, CSP, Flip Chip, Bumping, Optical Packaging, and WLP.

From the perspective of advances in the original technologies and R&D of pioneering products, the Group appropriates 3~5% of its revenues to R&D each year. Each year we obtain more than a hundred patents. Our expectation is to remain our leading position and competitive advantages in the market. In addition to being ahead of competitors in terms of the market share, we must outperform competitors when it comes to R&D.

- (2) Proactive Planning and Grasping Opportunities of Contract Manufacturing of IDM giants.

Currently, the international IDM giants need to move toward Fab Lite in order to maintain the effectiveness of their semiconductor production and reduce costs. This sets the trends of the increasing outsourcing business. To embrace the rising trend of semiconductor contract manufacturing, the Group has become more proactive in planning the operating strategies in recent years, heading west to orchestrate our presence in Mainland China, becoming closer to clients and the market to obtain potential business opportunities. All international giants want to gain a foothold in

Mainland China but cannot identify a sizable partner. With the present arrangement, we are able to encourage large firms to outsource their assembly and testing business. This will not impact our foundation in Taiwan. Instead, it will bring more business opportunities. Furthermore, the Group's Assembly and Testing Business Group is equipped with advanced engineering technologies, service capabilities, and flexibility of productivity arrangement. We also have outstanding capabilities for supply chain integration and stable human resources. These are all our competitive advantages in the assembly and testing industry.

- The Group has established a solid supply chain partnership with large international brands for a long time to grasp the changes in market demand and the mainstream trend of technology industry development.
- The Group has established a professional management team with extensive experience.
- The Group has advanced product management system and obtained various international standard certifications.
- The Group has efficient supply chain management capabilities to quickly meet market demand and establish cost competitive advantages. □
- The Group's product portfolio is rich and balanced with high technology content
- The Group's manufacturing skill is in the leading position of its peers

#### 4. Advantages and Disadvantages of Future Prospects, and Strategies to Face the Challenges

##### A. Advantages

- The gradually increasing demand for new products and technologies is a great opportunity, which has always had advantages in R&D and innovation.
- As IDMs continue to place orders for assembly and testing services, there will be more leeway and business opportunities for the IC assembly and testing industry in the future.
- 2.5D & 3D IC technology is very important because it meets the demand for small and lightweight products with high performance and high efficiency, and the Group already invested a lot of resources in the relevant R&D several years ago. Our assembly technologies are more advanced than those of our competitors.
- As a semiconductor assembly and testing company in Taiwan with substrate production lines and the capacity to steadily produce high-end substrates, ASE possesses key high-end assembly materials that enable it to bring down IC production costs and increase profitability.
- In addition to products assembled with conventional BGA, QFP, and QFN technologies, the Group also produces many high-end products such as chipsets, graphics processing units, photovoltaic products, and wireless communications modules. There are potential customers and bigger markets that can be developed.
- In the upcoming years, the demand for integrated circuits will continue to increase by a large margin. By taking the cluster effect and supply chain principles into consideration, the Group has appropriately deployed in geographic locations and in resource utilization so as to be ready for growth and seize the first business opportunity.
- Continue to hold the leading position in advanced technology along with high-yield and stable production lines, which will enable us to take more packaging orders
- Due to the increasing demand for portability and miniaturization of electronic products, customers' demand for miniaturization technology has become extensive. It is a great profit opportunity for the company with mass production experience that has been in the field of miniaturization, and has continued to invest in R&D.

- International large-scale brand owner has shown trend of continuing to release OEM orders, which will continue to and bring more business opportunities to the electronics foundry industry in the future.

#### B. Disadvantages

- Domestic competitors have been very active in their efforts to attract ASE customers. Alliances established among them may occur influence potentially.
- The thresholds for new technologies are gradually lowering. Competitors are improving their ability to copy while the product profit cycle is becoming shorter. This is an external threat to ASE, which has always had advantages its technologies. The investment of large amounts of capital and manpower in the R&D of new technologies means that there is less flexibility in terms of subsequent price adjustments. In an era of minimal profits, this factor is unquestionably a challenge.
- Customers are demanding ever higher standards in IC final assembly and testing. ASE must surpass its competitors' standards and customer expectations to improve performance.
- The semiconductor final assembly and testing business is capital-intensive. It is greatly affected by conditions in the semiconductor market, and management is also impacted by the general economy. IC assembly and testing companies need to make careful assessments when developing investment plans and conducting personnel, machine, capital, and technical planning. Flexibility is necessary to meet demand when facing large numbers of orders in growth times and to cope with the impact when the number of orders drops during industry recessions.
- The demand for assembly and test services is expected to grow, but average selling price will continue to be suppressed. Fluctuation of the exchange rate and raw material prices will be our main concern. Besides, the competition will be more intensive after the China Government starts to support the local companies of semiconductor industry. Moreover, the impact brought by trade protectionism is not to be underestimated.
- Competitors are quite aggressive in winning our customers.
- Since customers have become more stringent on the quality and cost requirements, in order to be distinctive, USI must exceed their expectations and of the competitors

#### C. Strategies to Face the Challenges

- Consolidation of group resources and sharing of technologies are necessary to offering turnkey services to create more added value and greater economic benefits. At the same time, the competitive edge of the group must be strengthened to win more business opportunities in the future when the market grows more prosperous.
- ASE's unique advanced production processes, flexible production, and diversified production lines can be utilized to meet urgent customer needs and fill large orders for new products and technological services.
- The solid financial structure of the Company provides stable resources that are sufficient to develop new technologies and new products.
- Technological advantages can be used to improve and perfect designs, establish optimal production processes, increase production process stability, and enhance ASE's competitiveness in terms of cost and quality to win major business opportunities.
- ASE's advanced technologies, capital advantages, and capacity to consolidate resources can be utilized to retain existing customers and attract new customers to



expand the business.

- Inter-plant technology exchanges and cross-departmental coordination will be maximized to increase synergy.
- The vertical integration and horizontal cooperation with regard to materials, packaging, testing, and systems enhance the competitiveness of the Company and make it possible to offer more comprehensive services. These factors also give ASE the flexibility to make adjustments at any time to face a range of external challenges.
- ASE continually works to strengthen its technological advantages to ensure that the diverse needs of customers can be met and to improve the competitiveness of the Company's service quality. Meanwhile, a network for safeguarding company patents must be established to maintain the company's competitiveness.
- The percentage of customer orders for ASE's turnkey services can be raised by increasing the pace of solution integration solutions to provide customers a comprehensive framework offering rapid, satisfactory services.
- Strengthen sales marketing activities and relationship with customers
- Develop technology and products that meet market demand
- Rationalize supply chain management to reduce purchasing cost
- Improve product design and material specifications
- With USI's unique advanced technology, flexible production capacity, and diverse production lines, we can satisfy customers if they need to develop new products, new technologies, or a large number of immediate needs.
- A sound financial structure provides stable and sufficient resources for the development of new technologies and funds required for new products.

## 5.2.2 Applications and Production Process of Main Products

1. Investment: not applicable

2. Assembly and Testing:

(1) Applications of Main Products:

### Assembly Technology

| Main products                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● Plastic Dual In-line Package (PDIP)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>◆ Household appliances, communications equipment, auto components, and remote control information systems for airplanes, weapon, and space shuttles and navigation equipment</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>● Plastic-Leaded Chip Carrier (PLCC)</li> <li>● Quad Flat Package (QFP)</li> <li>● Bump Chip Carrier (BCC)</li> <li>● Flip Chip packaging technology</li> <li>● Low Profile Quad Flat Package (LQFP), Thin Quad Flat Package (TQFP)</li> <li>● Ball Grid Array (BGA), Thin Profile Fine Pitch Ball Grid Array (TFBGA), Low Profile Ball Grid Array (LBGA)</li> <li>● Flip Chip Ball Grid Array (FCBGA), High Performance Flip Chip Ball Grid Array (HFC BGA)</li> <li>● Thermally Enhanced Ball Grid Array (TE BGA)</li> <li>● Very Thin Profile Fine Pitch Ball Grid Array (VF BGA)</li> </ul> | <ul style="list-style-type: none"> <li>◆ Personal computers , laptops, tablets, smartphones, and other smart mobile devices</li> <li>◆ Computers—graphics processing units, cloud servers, personal computer server (PCS) &amp; server microprocessors, voltage regulators, flash memory cards, hard disk drives, etc.</li> <li>◆ Microprocessors, communications equipment, wireless communications networks, etc.</li> <li>◆ Network communications products—wide area network (WAN) and local area network (LAN) servers, adapters, switches, routers, and cellular base stations</li> <li>◆ Consumer products—video cameras, DVD players, TV game consoles, digital set-top boxes, PDA, MID and information appliances</li> <li>◆ Other products—automatic car components,</li> </ul> |

| Main products                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● Land Grid Array (LGA)</li> <li>● Exposed Pad Quad Flat Package (Exposed Pad QFP)</li> <li>● Heat Slug Ball Grid Array (HSBGA)</li> <li>● Quad Flat No-leads (QFN)</li> <li>● Flip Chip Chip Scale Package (Flip Chip CSP)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Telematics</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>● Small Outline Package (SOP), Small Outline J-Lead Package (SOJ)</li> <li>● Thin Small Outline Package (TSOP)</li> <li>● Stacked Chip Scale Package (SCSP)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>◆ memory ICs</li> <li>◆ Personal computers, peripheral equipment , etc.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>● 3D Package</li> <li>● 2.5D Package</li> <li>● Stacked Ball Grid Array (Stacked BGA)</li> <li>● Multi-Chip Module Ball Grid Array (MCM BGA)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>◆ Mobile devices, including cell phones, PDAs, IoT components, etc.</li> <li>◆ High-end and Cloud servers, including graphics processors, network processors, etc.</li> <li>◆ Hard disk drives of laptops and personal computers</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>● Wafer Level Chip Scale Package (Wafer Level CSP)</li> <li>● Flip Chip Chip Scale Package (Flip Chip CSP)</li> <li>● Through-Silicon Via Technology (TSV Technology)</li> <li>● Integrated Passive Devices (IPD)</li> <li>● Silicon Interposer</li> <li>● Wafer Level Microelectromechanical Systems (Wafer Level MEMS)</li> <li>● Fine Pitch 3D Chip Stacking Technology</li> <li>● Heterogeneous Chip Integration System in Package (Heterogeneous Chip Integration SiP)</li> <li>● Fine Pitch Chip-on-Chip System in Package Solution (Fine Pitch CoC SiP Solution)</li> <li>● Embedded Active/Passive Substrate</li> <li>● eCompass Magnetic Sensor Package</li> </ul> | <ul style="list-style-type: none"> <li>◆ Cell phones, NB, digital cameras, IoT, IoT components, biomedical care, etc.</li> <li>◆ Wearable / portable consumer electronics and game consoles</li> <li>◆ Network 、 Network Server 、 Server</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>● Microelectromechanical Systems-based Micro Display (MEMS-based Micro Display)</li> <li>● Security Sensor Components</li> <li>● DDR2 800 Memory</li> <li>● Fan-out Map Package-on-Package Technology (Fan-out Map PoP Technology)</li> <li>● Fan-out Wafer Level Packaging (Fan-out WLP)</li> <li>● Wireless Connectivity System in Package Module (Wireless Connectivity SiP Module)</li> <li>● Wireless Communication System in Package Module (Wireless Communication SiP Module)</li> <li>● Optical Communication Module</li> </ul>                                                                                                                                    | <ul style="list-style-type: none"> <li>◆ Projectors and high definition televisions (HDTVs)</li> <li>◆ Security identification devices of personal computers, notebook computers, and e-commerce</li> <li>◆ Memory of computer, communication, and consumer electronics products</li> <li>◆ System-in-Package (SiP) products inside computer, communication, and consumer electronics products (Application-Specific Integrated Circuit [ASIC] + Multi-Chip Package [MCP] Memory, Baseband [BB] + SDRAM)</li> <li>◆ Portable consumer electronics, IoT</li> <li>◆ Mainly used in wireless communications modules in computer, communication, and consumer electronics products, including Bluetooth, WiFi, GPS, and Digital Video Broadcasting – Handheld/Terrestrial (DVB-H/T), smart home, car communication, AR/VR device data transmission</li> <li>◆ Communications applications in laptops,</li> </ul> |

| Main products | Applications                                                                                                                                                                                                 |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | tablets, network communications products, and IoT products and devices<br>◆ Communications applications for optical transceiver modules, Cloud servers, data centers, and high performance computing servers |

### Test Technology

| Main products                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● Quad Flat Package (QFP)</li> <li>● Bump Chip Carrier (BCC)</li> <li>● Flip chip package technology</li> <li>● Low Profile Quad Flat Package (LQFP), Thin Quad Flat Package (TQFP)</li> <li>● Ball Grid Array (BGA), Thin Profile Fine Pitch Ball Grid Array (TFBGA), Low Profile Ball Grid Array (LBGA)</li> <li>● Flip Chip Ball Grid Array (FCBGA), High Performance Flip Chip Ball Grid Array (HFCBGA)</li> <li>● Thermally Enhanced Ball Grid Array (TE BGA)</li> <li>● Very Thin Profile Fine-Pitch Ball Grid Array (VF BGA)</li> <li>● Land Grid Array (LGA)</li> <li>● Exposed Pad Quad Flat Package (Exposed Pad QFP)</li> <li>● Heat Slug Ball Grid Array (HSBGA)</li> <li>● Quad Flat No-leads (QFN)</li> <li>● Advanced Quad Flat No-Lead (aQFN)</li> <li>● Advanced Single Sided Substrate</li> <li>● System In Package</li> </ul> | <ul style="list-style-type: none"> <li>◆ Mainly used in microprocessors, communications equipment, automatic car components, personal computers, mobile communications modules, and chipsets</li> <li>◆ Wireless communications networks, digital cameras, information appliances, LCD TVs, and smartphones</li> <li>◆ Personal computers and notebook computers</li> <li>◆ TV game consoles, DVD players, and set-top boxes</li> <li>◆ Personal computers, notebook computers, wireless communications networks, digital cameras, information appliances, and smartphones</li> <li>◆ Cell phone chipsets, MP3 processors</li> <li>◆ Consumer products—video cameras, digital cameras, DVD players, TV game consoles, set-top boxes, PDAs, MIDs, etc.</li> <li>◆ Smartphones</li> <li>◆ Wearable devices</li> <li>◆ Tablet computers</li> <li>◆ Health management systems and healthcare applications</li> <li>◆ Commercial applications and IoT-related products</li> <li>◆ Auto safety systems</li> <li>◆ Industrial sensor components</li> </ul> |
| <ul style="list-style-type: none"> <li>● Small Outline Package (SOP), Small Outline J-Lead Package (SOJ)</li> <li>● Thin Small Outline Package (TSOP)</li> <li>● Stacked Chip Scale Package (SCSP)</li> <li>● Semiconductor Embedded in Substrate (SESUB)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>◆ Mainly used in memory ICs</li> <li>◆ Personal computers and peripheral equipment</li> <li>◆ Power Management IC &amp; Portable Device</li> <li>◆ HPC Device</li> <li>◆ Graphics Chipsets</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### Important Applications of the Group's Main Production Service (Assembly and Testing Technologies):

| Major Products                                        | Major Application                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Turnkey solution for IC assembly and testing services | Integrated Circuits, widely applied in PCs, Telecommunications, Internet and Consumer Electronics, including Laptops, Tablets, Smart Phones, Feature Phones, wearable devices, smart appliances, STBs (Set Top Box), LCD TVs, DSCs, Game Consoles, IoT, fingerprint sensors, smart cars, VR/AR, Artificial Intelligence, Drones and Voice Assistant etc. |

## (2) Process Flow

### Production Flow of the Main Production Service



#### Packaging Technology

- Lead frame products:  
Wafer dicing → die attach → wire bonding → molding → marking → forming → inspection → packing
- Ball grid array products:  
Wafer dicing → die attach → wire bonding → molding → marking → solder ball mount → singulation → inspection → packing
- Flip chip products:  
Wafer bumping → wafer slicing → flip chip mounting → underfill dispensing → marking → solder ball mount → singulation → inspection → packing
- Through silicon via products:  
Through silicon via etching → through silicon via insulation → through silicon via copper plating → wafer thinning → dual-side copper RDL → solder ball mount → stacking → inspection → packing
- Wireless Connectivity SiP Modules:  
Solder paste printing → component-mount → high temperature reflow → molding → laser marking → singulation → shilding → inspection → packing

#### Testing techniques

- Lead frame and ball grid array products:  
IC testing → aging test (according to customer needs) → baking → inspection → tap-on-reel packing → product packing
- High-frequency module products/power management module products:  
Testing system selection → program development → verification and debugging → pre-production → mass production

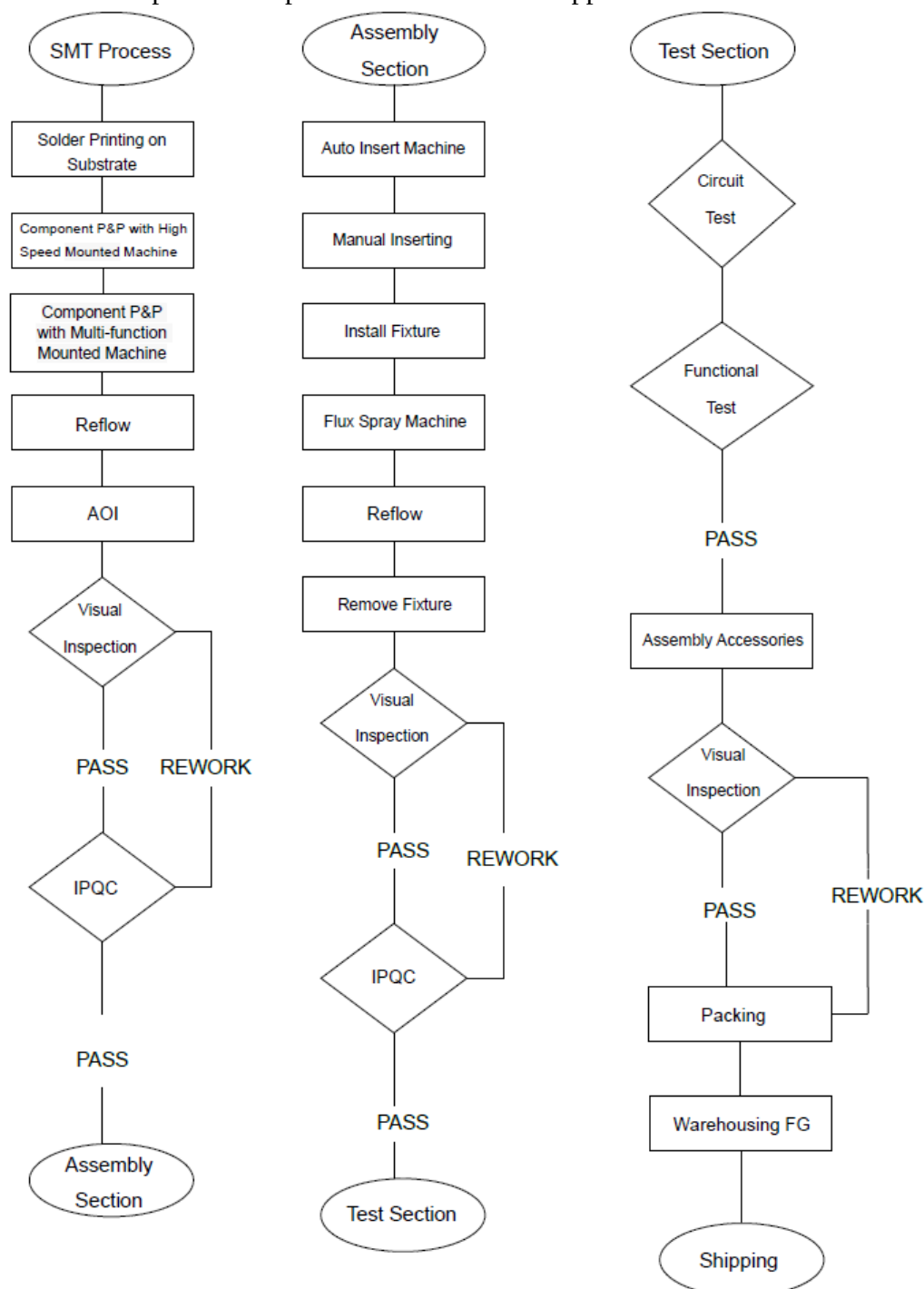
## 3. Electronics Manufacturing Services

### (1) Important Applications of Main Products:

| Products                       | Important Utilizations                                                                                                                                                          |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SiP                            | Cell phone, notebook computer, tablet, wearable device                                                                                                                          |
| SHD                            | Logistics, retail-use handheld devices                                                                                                                                          |
| POS                            | Electronic system for retail industries, catering industries, hospitality industries, etc. The main function is to compute the sales, inventory and customer purchase behavior. |
| LCD Control Panel              | LCD Monitor                                                                                                                                                                     |
| SSD                            | Personal computer, notebook computer, server                                                                                                                                    |
| X-86 Mother Board              | Desktop PC, workstation, server                                                                                                                                                 |
| Automotive LED lighting system | Car lighting                                                                                                                                                                    |

## (2) Production process

The main production process is based on the application of SMT:



### 5.2.3 Supply of major Raw materials

The Group is a semiconductor engineering business providing packaging services for customers. The wafers are normally provided by customers, most of which are well known international semiconductor companies with good long-term business relations with the Group.

The principal packaging materials, including lead frames, substrates, gold wire, copper wire, and epoxy molding compound (EMC), come from qualified suppliers who have outstanding performance in quality control. The substrates in particular are mainly supplied by the subsidiaries ASEMTL Shanghai and ASE Electronics Inc. Hence, the Group has total control of materials acquisition.

| Major Raw Materials | Major Suppliers                                                    | Market Status                 | Procurement Strategy              |
|---------------------|--------------------------------------------------------------------|-------------------------------|-----------------------------------|
| Substrate           | ASEMTL SH/ ASEE /Company A/Company B/Company C/Company D/Company T | Supply and demand equilibrium | Long-term collaborating suppliers |
| Lead Frame          | Company E/Company F/Company G Company M/Company N/Company O        | Supply and demand equilibrium | Long-term collaborating suppliers |
| Gold Wire           | Company H/ Company I/Company J Company P/Company Q/Company R       | Supply and demand equilibrium | Long-term collaborating suppliers |
| Copper Wire         | Company K/Company J/Company R Company Q/Company P                  | Supply and demand equilibrium | Long-term collaborating suppliers |
| Compound            | Company E/Company L/Company D/Company S                            | Supply and demand equilibrium | Long-term collaborating suppliers |

Electronics manufacturing services of the Group primarily supply of raw material includes printed circuit board, integrated circuit, hard disk drive and computer case, ceramic PCB, ink, semiconductor device, mechanism parts, quartz crystal unit...etc. Suppliers are comprised of mostly ISO-9000 registered companies, and have been in good collaborative relationship with us. At the same time, procurement strategies are adopted according to different raw materials to ensure that the supply of materials has a competitive price advantage. Also, decentralizing sources of supply allows risk diversification, and ensures reasonable costs, accurate delivery service and good quality.

#### 5.2.4 The Purchases (Sales) Amount and Percentage of Suppliers and Customers Accounting for More than 10% of the Total Purchases (Sales) Amount in the Past Two Fiscal Years:

##### 1. Names of customers of the Group accounting for 10% or more of sales

Unit: NT\$ in thousands

| Ranking | 2018      |             |                               |                              | 2017      |             |                               |                              |
|---------|-----------|-------------|-------------------------------|------------------------------|-----------|-------------|-------------------------------|------------------------------|
|         | Name      | Amount      | Percentage of Total Sales (%) | Relationship with the issuer | Name      | Amount      | Percentage of Total Sales (%) | Relationship with the issuer |
| 1       | Company A | 92,117,839  | 24.8                          | None                         | Company A | 83,873,393  | 28.9                          | None                         |
|         | Others    | 278,974,582 | 75.2                          |                              | Others    | 206,567,815 | 71.1                          |                              |
|         | Net Sales | 371,092,421 | 100.0                         |                              | Net Sales | 290,441,208 | 100.0                         |                              |

Reasons of increases and decreases: The amounts of sales and percentage changes vary with customers' market share.

##### 2. Suppliers of the Group accounting for 10% or more of purchases

Unit: NT\$ in thousands

| Ranking | 2018          |             |                                   |                              | 2017          |             |                                   |                              |
|---------|---------------|-------------|-----------------------------------|------------------------------|---------------|-------------|-----------------------------------|------------------------------|
|         | Name          | Amount      | Percentage of Total Purchases (%) | Relationship with the issuer | Name          | Amount      | Percentage of Total Purchases (%) | Relationship with the issuer |
| 1       | Company BB    | 19,108,911  | 9.0                               | None                         | Company AA    | 18,497,609  | 12.0                              | None                         |
|         | Others        | 191,843,913 | 91.0                              |                              | Others        | 142,173,053 | 88.0                              |                              |
|         | Net Purchases | 210,952,824 | 100.0                             |                              | Net Purchases | 160,670,662 | 100.0                             |                              |

## 5.2.5 Production of the Group in the Most Recent Two Fiscal Years

Units: Capacity and production volume in thousands; NT\$ in thousands

| Production Figures<br>Main Product               | Year | 2018       |                   |                  | 2017       |                   |                  |
|--------------------------------------------------|------|------------|-------------------|------------------|------------|-------------------|------------------|
|                                                  |      | Capacity   | production volume | Production Value | Capacity   | production volume | Production Value |
| Assembly services                                |      | 56,715,493 | 47,754,692        | 144,639,217      | 40,048,550 | 35,012,312        | 97,445,792       |
| Testing services*                                |      | —          | —                 | 23,613,641       | —          | —                 | 16,845,286       |
| Electronics packaging and manufacturing services |      | 747,021    | 481,206           | 137,611,564      | 813,253    | 531,203           | 120,419,266      |
| Others**                                         |      | —          | —                 | 4,064,949        | —          | —                 | 2,998,593        |
| Total                                            |      | 57,462,514 | 48,235,898        | 309,929,371      | 40,861,803 | 35,543,515        | 237,708,937      |

\* Price calculation is based on test time; therefore, quantities are not disclosed.

\*\* Units are inconsistent; therefore, quantities are not disclosed.

## 5.2.6 Sales of the Group in the Most Recent Two Fiscal Years

Units: Volume in thousands; NT\$ in thousands

| Sales<br>Main Product                            | Year | 2018           |            |              |             | 2017           |            |              |             |
|--------------------------------------------------|------|----------------|------------|--------------|-------------|----------------|------------|--------------|-------------|
|                                                  |      | Domestic Sales |            | Export Sales |             | Domestic Sales |            | Export Sales |             |
|                                                  |      | Volume         | Value      | Volume       | Value       | Volume         | Value      | Volume       | Value       |
| Assembly Services                                |      | 8,644,525      | 33,473,956 | 39,110,167   | 144,834,266 | 6,926,680      | 24,369,220 | 28,085,632   | 101,855,899 |
| Testing services*                                |      | —              | 1,937,524  | —            | 33,965,678  | —              | 1,923,330  | —            | 24,233,947  |
| Electronics packaging and manufacturing services |      | 70,924         | 8,075,656  | 410,282      | 143,814,728 | 67,000         | 7,334,302  | 464,203      | 126,613,714 |
| Others**                                         |      | —              | 2,143,656  | —            | 2,846,957   | —              | 1,786,795  | —            | 2,324,001   |
| Total                                            |      | 8,715,449      | 45,630,792 | 39,520,449   | 325,461,629 | 6,993,680      | 35,413,647 | 28,549,835   | 255,027,561 |

\* Price calculation is based on test time; therefore, quantities are not disclosed.

\*\* Units are inconsistent; therefore, quantities are not disclosed.

## 5.3 Employees

### 5.3.1 Organization

To maintain competitiveness in the market, the Group has developed a prior strategy of training outstanding engineering talent, perfecting the Group's responsibility systems, ensuring the fulfillment of organizational functions, and supporting employee career development.

### 5.3.2 Employee information during the current two fiscal years up to the date of publication of the annual report:

| Year                     |                       | 2017   | 2018   | February 28, 2019 |
|--------------------------|-----------------------|--------|--------|-------------------|
| Number of Employees      | Technical personnel   | 17,650 | 25,815 | 25,211            |
|                          | Managerial personnel  | 3,870  | 6,248  | 6,227             |
|                          | Office clerks         | 5,954  | 7,217  | 7,876             |
|                          | Operators             | 41,279 | 54,611 | 52,056            |
|                          | Total                 | 68,753 | 93,891 | 91,370            |
| Average Age              |                       | 32.5   | 33.5   | 32.9              |
| Average Years of Service |                       | 5.7    | 6.2    | 6.3               |
| Education                | Doctorate             | 0.2    | 0.3    | 0.2               |
|                          | Masters               | 6.7    | 6.8    | 7.1               |
|                          | College or University | 46.4   | 47.7   | 48.3              |
|                          | High School           | 36.5   | 36.8   | 35.8              |
|                          | Below High School     | 10.2   | 8.4    | 8.6               |

## 5.4 Expenditures on Environmental Protection

5.4.1 Accounts of loss of the Group (including damages) due to environmental pollution during the current fiscal year up to the date of the publication of the annual report, the total penalty amount, future countermeasures, and any potential expenditures.

- 2019: As of the Date of this Annual Report, the Group was fined NT\$ 25,000 in total.
- 2018: No major incidents of environmental pollution.

The subsidiary, Advanced Semiconductor Engineering, Inc.:

1. K22: Environmental Protection Bureau, Kaohsiung City Government sent an official letter on Dec. 20, 2018, notifying a fine of NT\$25,000 for breach of Article 18 and Article 22, Measures for the Establishment and Management of Waste Water and Sewage Treatment Unit, Specialist, or Facility. The measures were established in accordance with Article 21, Water Pollution Control Act. Advanced Semiconductor Engineering, Inc. received the letter on Jan. 28, 2019.

Future Countermeasures: To strengthen the shift management mechanism and ensure that back-up personnel for the personnel on-leave logs and checks in for the operation daily.

2. K21: Environmental Protection Bureau, Kaohsiung City Government sent an official letter on Dec. 26, 2018, notifying a fine of NT\$20,000 for its breach of Article 4, Water Pollution Control Measures and Test Reporting Management Regulations. The measures were established in accordance with Article 18, Water Pollution Control Act.

Reasons for Appeal: The Company's subsidiary has reported to and obtained approval from Export Processing Zone Administration for its practice, so it has not violated the regulations of Water Pollution Control Measures claimed by the Environmental Protection Bureau.

Note: K21 is in the process of appeal.

5.4.2 Accounts of the current pollution status, how the improvement in this area will impact the Company's earnings, competitive position, and capital expenditures, and any estimations of major capital expenditures for environmental protection in the next annual budget.

The subsidiary, Advanced Semiconductor Engineering, Inc.

| Item                             | 2019                                                                                                                                                                                                                                                                                                                                                                                                   | 2020                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Improvement measures to be taken |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                        |
| (1) Improvement plans            | <ol style="list-style-type: none"> <li>1. Continued certification of ISO 14001 Environmental Management System</li> <li>2. Continued operation in compliance with ISO 14064 Greenhouse Gas Management System criteria to reduce greenhouse gas emissions</li> <li>3. Promotion of eco-design in company products</li> <li>4. Continued implementation of ISO 50001 Energy Management System</li> </ol> | <ol style="list-style-type: none"> <li>1. Continued certification of ISO 14001 Environmental Management System</li> <li>2. Continued operation in compliance with ISO 14064 Greenhouse Gas Management System criteria to reduce greenhouse gas emissions</li> <li>3. Promotion of eco-design in company products</li> <li>4. Continued implementation of ISO 50001 Energy Management System</li> </ol> |



| Item | 2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 5. Continued implementation of inventory and verification of product carbon footprint and water footprint<br>6. Organization of regular sustainability forums to promote the sustainable development of the company<br>7. Continued promotion of use of mass rapid transit systems to reduce energy consumption and CO2 emissions<br>8. Introduction of energy-saving products and improvements to energy-saving engineering projects<br>9. Cleaning and improvement of wastewater treatment equipment and increases in wastewater reclamation and accompanying benefits<br>10. Expanding the Water Recycling Plant<br>11. Replacement of filtration materials in wastewater treatment sand filters and activated carbon filters<br>12. Installation of high-efficiency pollution control facilities<br>13. Replacement of waste gas control equipment filler and reductions in volatile organic compounds (VOCs)<br>14. Reduction, recycling, and reuse of waste<br>15. Reduction in sludge volume, and recycling and reuse of metal components<br>16. Optimization of the amount of chemicals used<br>17. Odor prevention measures in surrounding areas<br>18. Emergency response training and drills<br>19. Strengthened noise control measures<br>20. Organizing events such as Environmental Protection Month and Water & Energy Saving Month<br>21. Installation of new waste gas scrubbers<br>22. Installation of new dust collectors<br>23. Research into best available air | 5. Continued implementation of inventory and verification of product carbon footprint and water footprint<br>6. Organization of regular sustainability forums to promote the sustainable development of the company<br>7. Continued promotion of use of mass rapid transit systems to reduce energy consumption and CO2 emissions<br>8. Introduction of energy-saving products and improvements to energy-saving engineering projects<br>9. Cleaning and improvement of wastewater treatment equipment and increases in wastewater reclamation and accompanying benefits<br>10. Maintaining and replacing the reverse osmosis membrane in the water recycling plant<br>11. Replacement of filtration materials in wastewater treatment sand filters and activated carbon filters<br>12. Installation of high-efficiency pollution control facilities<br>13. Replacement of waste gas control equipment filler and reductions in volatile organic compounds (VOCs)<br>14. Reduction, recycling, and reuse of waste<br>15. Reduction in sludge volume, and recycling and reuse of metal components<br>16. Optimization of the amount of chemicals used<br>17. Odor prevention measures in surrounding areas<br>18. Emergency response training and drills<br>19. Strengthened noise control measures<br>20. Organizing events such as Environmental Protection Month and Water & Energy Saving Month<br>21. Installation of new waste gas scrubbers<br>22. Installation of new dust collectors<br>23. Research into best available air |

| Item                                                                                                | 2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                     | <p>treatment equipment for air pollution control</p> <p>24. Installation of new wastewater reclamation system</p> <p>25. Reusable packing materials</p> <p>26. Sewage collection system</p> <p>27. Machine airtightness verification</p> <p>28. Maintenance of advanced oxidation treatment equipment</p> <p>29. The existing rotor and the rotary type regenerative thermal oxidizers</p> <p>30. Maintaining and managing the underground pipes</p> <p>31. Improving the environment of the waste water treatment plant</p> <p>32. Regularly maintaining the control monitors of the waste water treatment plant</p> <p>33. Maintaining the existing rotor</p> <p>34. Improving the energy-saving engineering system</p> <p>35. Replacing the fillers of the exhaust scrubber system</p> <p>36. Installing waste water treatment systems for processes</p> <p>37. Maintaining related waste water treatment facilities</p> | <p>treatment equipment for air pollution control</p> <p>24. Installation of new wastewater reclamation system</p> <p>25. Reusable packing materials</p> <p>26. Sewage collection system</p> <p>27. Machine airtightness verification</p> <p>28. Maintenance of advanced oxidation treatment equipment</p> <p>29. The existing rotor and the rotary type regenerative thermal oxidizers</p> <p>30. Maintaining and managing the underground pipes</p> <p>31. Improving the environment of the waste water treatment plant</p> <p>32. Regularly maintaining the control monitors of the waste water treatment plant</p> <p>33. Maintaining the existing rotor</p> <p>34. Improving the energy-saving engineering system</p> <p>35. Replacing the fillers of the exhaust scrubber system</p> <p>36. Installing waste water treatment systems for processes</p> <p>37. Maintaining related waste water treatment facilities</p> |
| (2) Pollution control equipment to be purchased or planned expenditures for the two following years | <p>1. Promotion of voluntary establishment of improvement projects in each department</p> <p>2. Installation of and improvements to wastewater and waste gas control equipment</p> <p>3. Implementation of low-frequency noise control engineering projects</p> <p>4. Replacement of outdated environmental protection equipment</p> <p>5. Increase of greenery in the surroundings</p> <p>6. Promotion of waste recycling and installation of waste reduction equipment</p> <p>7. Use of energy-saving lighting equipment and introduction of green energy</p> <p>8. Installation of energy management and control systems</p> <p>9. Improvements to and expansion of water reclamation systems</p> <p>10. Installation of and improvements to waste gas scrubbers</p>                                                                                                                                                     | <p>1. Promotion of voluntary establishment of improvement projects in each department</p> <p>2. Installation of and improvements to wastewater and waste gas control equipment</p> <p>3. Implementation of low-frequency noise control engineering projects</p> <p>4. Replacement of outdated environmental protection equipment</p> <p>5. Increase of greenery in the surroundings</p> <p>6. Promotion of waste recycling and installation of waste reduction equipment</p> <p>7. Use of energy-saving lighting equipment and introduction of green energy</p> <p>8. Installation of energy management and control systems</p> <p>9. Improvements to and expansion of water reclamation systems</p> <p>10. Installation of and improvements to waste gas scrubbers</p>                                                                                                                                                     |

| Item                                | 2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | 11. Roter and the rotary type regenerative thermal oxidizers<br>12. Installation of the best available air pollution control equipment<br>13. Installation of and improvements to dust collectors<br>14. Installation of and improvements to wastewater reclamation, filtration, and distillation equipment<br>15. Installation of and improvements to sludge-drying equipment<br>16. Improvements to and maintenance of zeolite rotor equipment                                                                                                                     | 11. Roter and the rotary type regenerative thermal oxidizers<br>12. Installation of the best available air pollution control equipment<br>13. Installation of and improvements to dust collectors<br>14. Installation of and improvements to wastewater reclamation, filtration, and distillation equipment<br>15. Installation of and improvements to sludge-drying equipment<br>16. Improvements to and maintenance of zeolite rotor equipment                                                                                                  |
| Anticipated improvements            | 1. Reductions in energy consumption and CO2 emissions<br>2. Odor prevention measures in surrounding areas<br>3. Extended service life for equipment<br>4. Reductions in wastewater, waste, and air pollution; increased waste recycling<br>5. Reductions in noise pollution in surrounding areas<br>6. Reduced energy consumption<br>7. Improved comfort in operational environments<br>8. Increased water recycling and reduced water consumption<br>9. Pollution prevention and monitoring<br>10. Treatment capacity for highly-organic waste liquid > 10 tons/day | 1. Reductions in energy consumption and CO2 emissions<br>2. Odor prevention measures in surrounding areas<br>3. Extended service life for equipment<br>4. Reductions in wastewater, waste, and air pollution; increased waste recycling<br>5. Reductions in noise pollution in surrounding areas<br>6. Reduced energy consumption<br>7. Improved comfort in operational environments<br>8. Increased water recycling and reduced water consumption<br>9. Pollution prevention and monitoring<br>10. Waste recycling: >75% across the entire plant |
| Expenditure                         | NT\$1,741,164 thousand                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | NT\$1,311,141 thousand                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| (3) Impacts after improvements      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Impact on net profit                | The actual effects of corporate social responsibility and sustainable development on net profit cannot be estimated.                                                                                                                                                                                                                                                                                                                                                                                                                                                 | The actual effects of corporate social responsibility and sustainable development on net profit cannot be estimated.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Impact on corporate competitiveness | The environmental protection policy will improve the corporate image of the Group and comply with the goal of sustainable development investors expect of the Company.                                                                                                                                                                                                                                                                                                                                                                                               | The environmental protection policy will improve the corporate image of the Group and comply with the goal of sustainable development investors expect of the Company.                                                                                                                                                                                                                                                                                                                                                                            |
| Countermeasures not taken           | Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

The subsidiary, Siliconware Precision Industries Co., Ltd. :

| Item                             | 2018 & 2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Improvement measures to be taken |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| (1) Improvement plans            | <p>1. Air pollution control</p> <ul style="list-style-type: none"> <li>(1) Setting proprietary preventive equipment by types of exhaust gases</li> <li>(2) Implement maintenance plan to maintain equipment stability and ensure that emissions conform to legal requirements.</li> <li>(3) Implement equipment malfunction drills to reduce impact of discharged flue gas on the environment.</li> <li>(4) Regular test result indicates intensity of each pollution is lower than the limit of law regulations.</li> </ul> <p>2. Water pollution prevention and control, and water recycling and reuse</p> <ul style="list-style-type: none"> <li>(1) Improving overall processing efficacy, waste water is diverted and collected based on its pollution characteristic. Plant processing facility then adequately process the effluence.</li> <li>(2) Setting stricter warning value than requirement of regulations, and arranging self-test regularly to have early warning when the water quality is abnormal.</li> <li>(3) Regular test result indicates intensity of each pollution is lower than the limit of law regulations.</li> <li>(4) Except setting water quality abnormality and leak emergency response procedure, SPIL organizes the drills regularly to reduce the environmental impact due to abnormality of wastewater processing.</li> <li>(5) For recyclable discharge water (such as discharge water of pure water system, air conditioning condensate, waste water from grinding and sawing), constructed waste water recycling systems to increase the use of water resources.</li> </ul> <p>3. Waste management</p> <ul style="list-style-type: none"> <li>(1) Waste management principles: prefer recycling and reuse, then burning. These methods, are used to decrease volume and recycle heating. Only when waste cannot be processed with the aforementioned methods are they buried.</li> <li>(2) Current recycled and reused items: paper, waste glass, waste plastic, scrap metal, waste resin, waste solvent, reject, lead frame packaging material, electroplating effluent, and stripper etc. Over 9,659 tons of industrial waste material was recycled and reused in 2018, and the rate of recycling and reuse is more than 66%.</li> <li>(3) Conducting vendor audit plan and rating management, and scheduling audit for regulations regularly and irregularly.</li> </ul> <p>4. Energy conservation and carbon reduction</p> <ul style="list-style-type: none"> <li>(1) Improving energy efficiency, reducing energy consumption and reducing GHG.</li> <li>(2) Conducted ISO 50001 Energy Management System and passed the certification in 2013 to promote energy conservation management more effectively.</li> <li>(3) Various energy-saving measures are implemented every year.</li> </ul> <p>5. Safety and health management</p> <ul style="list-style-type: none"> <li>(1) Based on laws and regulations of safety and health, conducting international safety and health management system to process safety and health management.</li> </ul> |

| Item                                                           | 2018 & 2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                | (2) All facilities were passed OHSAS 18001 occupational health and safety management system, Taiwan Occupational Safety and Health Management System Certification (CNS 15506) and Operation Directions for the Performance Recognition of the Occupational Safety and Health Management Systems of Business Entities from Labor Affairs. It indicates that safety and health management has achieved international standard to ensure employees have a healthy, comfortable and safe working environment.                                                                                                                                                                                                                        |
| (2) Expect environmental protection expenditures for two years | <p>Expect expenditure is NT\$893,438 thousand in total:</p> <ol style="list-style-type: none"> <li>1. Due to production line expansion, it adds water recycling equipment, sewage treatment facility and exhaust gas treatment facility in 2019, and the expenditure expects to increase NT\$631,116 thousand.</li> <li>2. Due to production line expansion, it adds sewage treatment facility and exhaust gas treatment facility in 2020, and the expenditure expects to increase NT\$262,322 thousand.</li> </ol>                                                                                                                                                                                                               |
| (3) Impacts after improvements                                 | <ol style="list-style-type: none"> <li>1. Air pollution control:Reduced about 112 tons of emissions in VOCs in 2018. °</li> <li>2. Water pollution prevention and control, and water recycling and reuse : Total amount of recycled water reached more than 7,993,409 tons in 2018.</li> <li>3. Waste management : The rate of recycling and reuse in 2018 is more than 84%. Only when waste cannot be recycling, reuse and burning are they buried. Over 14,484 tons of industrial waste material was recycled and reused in 2017, and the rate of recycling and reuse is more than 66%.</li> <li>4. Energy conservation and carbon reduction : Nearly 26,924 metric tons of CO2 emissions have been reduced in 2018.</li> </ol> |

The subsidiary, USI Inc.:

| Item                                                                                                                 | 2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Proposed adoption of improvement measures                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| (1) Improvement Program                                                                                              | <ol style="list-style-type: none"> <li>1. To get ISO14001 Environmental Management System certificate continuously</li> <li>2. To implement to reduce greenhouse gas and get ISO 14064 greenhouse gas management system certificate continuously</li> <li>3. To get ISO 50001 Energy Management System certificate continuously</li> <li>4. To implement and promote the sustainability development of the company</li> <li>5. Energy saving improvement</li> <li>6. Maintenance, cleaning and improvement of wastewater control equipment</li> <li>7. Exhaust gas prevention equipment maintenance and VOC reduction</li> <li>8. Waste reduction and recycling</li> <li>9. Optimize the amount of chemical use</li> <li>10. Emergency training, drills and environmental plans</li> <li>11. Noise prevention monitoring and strengthening</li> <li>12. Reusable packaging materials</li> <li>13. To get environmental approval</li> </ol> | <ol style="list-style-type: none"> <li>1. To get ISO14001 Environmental Management System certificate continuously</li> <li>2. To implement to reduce greenhouse gas and get ISO 14064 greenhouse gas management system certificate continuously</li> <li>3. To get ISO 50001 Energy Management System certificate continuously</li> <li>4. To implement and promote the sustainability development of the company</li> <li>5. Energy saving improvement</li> <li>6. Maintenance, cleaning and improvement of wastewater control equipment</li> <li>7. Exhaust gas prevention equipment maintenance and VOC reduction</li> <li>8. Waste reduction and recycling</li> <li>9. Optimize the amount of chemical use</li> <li>10. Emergency training, drills and environmental plans</li> <li>11. Noise prevention monitoring and strengthening</li> <li>12. Reusable packaging materials</li> <li>13. To get environmental approval</li> </ol> |
| (2) Polluting equipment or expenditures to be purchased for environmental capital expenditures in the next two years | <ol style="list-style-type: none"> <li>1. Promotion of improvement programs voluntarily for individual department</li> <li>2. To improved wastewater/exhaust gas prevention and control equipment</li> <li>3. Environmental protection equipment replacement</li> <li>4. Waste recycling promotion and reduction</li> <li>5. Using green energy</li> <li>6. Wastewater recycling and filtration equipment</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ol style="list-style-type: none"> <li>1. Promotion of improvement programs voluntarily for individual department</li> <li>2. To improved wastewater/exhaust gas prevention and control equipment</li> <li>3. Environmental protection equipment replacement</li> <li>4. Waste recycling promotion and reduction</li> <li>5. Using green energy</li> <li>6. Wastewater recycling and filtration equipment</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                 |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                              |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Expected improvement            | 1. Reduce energy consumption and CO2<br>2. To extend the life of equipment<br>3. Wastewater/waste/air pollution reduction and resource recovery<br>4. Water recycling / reducing water consumption<br>5. Pollution prevention and monitoring | 1. Reduce energy consumption and CO2<br>2. To extend the life of equipment<br>3. Wastewater/waste/air pollution reduction and resource recovery<br>4. Water recycling / reducing water consumption<br>5. Pollution prevention and monitoring |
| Amount of payout                | NT\$92,300 thousand                                                                                                                                                                                                                          | NT\$97,000 thousand                                                                                                                                                                                                                          |
| (3) Improved impact             |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                              |
| Impact on net profit            | The impact of income can not be predicted by corporate social responsibility and sustainability development                                                                                                                                  | The impact of income can not be predicted by corporate social responsibility and sustainability development                                                                                                                                  |
| Impact on competitive position  | Corporate social responsibility and sustainability development. To enhance company's image via friendly environment policy. To comply with the target of sustainability development of investors                                             | Corporate social responsibility and sustainability development. To enhance company's image via friendly environment policy. To comply with the target of sustainability development of investors                                             |
| Failure to take countermeasures | Not applicable                                                                                                                                                                                                                               | Not applicable                                                                                                                                                                                                                               |

## 5.5 Labor-Management Relations

### 5.5.1 Employee Benefits

The Group recognizes that the employer and employees are a unified whole so it strengthens its welfare, cultural and entertainment facilities, including libraries, social activities, annual outings, cultural and entertainment competitions, so that employees of the Group all have the opportunities to relax their body and mind. Measures to enhance employee benefits and labor relations are as below:

- Free group medical insurance for employees and their dependents
- Full-scale workplace health and safety improvements to maintain a clean and comfortable working environment
- Periodic or non-periodic labor relation communication meetings and periodic orientation meetings for new employees.
- Creation of health and safety committees in plants
- Forming the Employee Welfare Committee which handles all employee benefits and rolls out optional welfare systems.
- Diversified employee buffets, and convenient stores and commissary that offer discounts.
- Marriage gift money, childbirth subsidy, bereavement allowance, hospitalization allowance, and learning funds.
- Employee emergency relief fund.
- A sound retirement system
- Health check-ups for employees
- Bonuses in shares and cash

- Bonuses for the three major festivals
- Company trips and product purchases
- NT\$6~15 million travel insurance for each employee traveling on business
- Free meals on national holidays
- Employee fitness centers
- Employee clinic and health center. Regular health examination and promotion activities that is beneficial to health, to help employees understand their own health conditions and enhance health awareness.
- Employee stock option certificates
- Nursing and accommodating women employees with more comfortable and better-equipped breastfeeding room.
- Miscellaneous clubs and family activities such as artistic seminars, concerts, watching movies, sports competitions, family days, and so on to give our employees a work-life balance and fun.
- Employee massage room.
- Employee Care Center (including one-on-one consultation rooms, group consultation areas, and case study areas).
- Soft lecturing events.
- Express-Service System that immediately solves employees' opinions about public facilities and livelihood issues.
- Employees shuttle buses for commute, electric shuttle buses to the MRT station back and forth, electric shuttle buses across manufacturing plants.
- Green energy special parking spaces, shared electric scooters, battery exchange and charging stations for electric scooters.
- A multi-functional and comfortable dormitory for employees who require accommodation.
- Introduce employee discounts on designated shops and issuance of various coupons, gift certificates, meal coupons, admission tickets for theatrical performances, etc.
- Providing multiple on-site services such as bank, insurance, tour, tax application, consumer goods sale...etc.
- Special arrangements with several kindergartens for discounts and customized daycare services.
- Providing car/motorcycle parking spaces to meet the needs of employees, also providing parking spaces for pregnant employees.

#### 5.5.2 Employee Development

- We have annual training and development plans to arrange special on-the-job trainings for employees to enhance their expertise.
- Employees who have undergone in-service training to obtain further academic qualifications can take the academic qualification examination for a substantial salary adjustment.
- Channels have been made available for employees to participate in industry-academia cooperation programs in universities, and the company also operates the Workforce Development Agency's dual-track flagship vocational training programs.
- We provide employees with lifelong learning resources by running "in-service industrial technology graduate programs." This ensures that we offer diversified engineering talent development.
- We run "Courses of Intelligent Equipment" and assist employees to make a transformation and increase their professional capabilities in order to meet the demands of automation.

#### 5.5.3 Employee Training and the Implementation

- New employees are provided with orientation training, professional training, and



assessment. Implement training and mentoring programs for new employees and developing a special skills training to help employees maintain and develop their qualifications so that they can do their work better. We have established standardized training procedures.

- We design and implement management skill training and career development for employees with managerial roles. We develop employees with managerial talents that are required within the organization.
- Professional skills training programs for engineers have been developed and implemented.
- Professional skills training and on-the-job training programs to help employees develop a second specialty are provided.
- Programs have been established to train internal professional lecturers and trainers.
- Diverse Education and Training System is set based on Company's goal, organization function and individual position requirements, and divided into different courses as core program, selective program, annual strategic program and language training
- A diverse e-learning environment, breaking the time/space limitation, so that employees can learn whenever they need to, encouraging self-motivated learning and enhancing the competitive advantage of each employee.
- Establishment of employee's personal learning roadmap by following respective subsidiaries strategy with competencies. Employees are able to join the class according to its professional skills or grade.
- Various learning model and refined training contracture provides OJT (Off-Job Training), OJT (On-Job Training) and SD (Self Development) abundantly. With our E-learning structure and system, all colleagues are able to participate and organize to create the greatest benefits and value.
- We design and execute training on industrial safety and environmental protection.
- Employees are given opportunities to attend external training and seminars.
- ASE has established its Regulations Governing Funding for Employees Taking External Training and Acquiring Licenses and Certificates to provide subsidies for employees assigned by their departments to participate in external training or voluntarily acquiring licensing or certification. The objective is to encourage employees to further their learning and improve their professional skills and knowledge by undergoing training outside of work. The policy is also intended to allow the use of external training resources to compensate for inadequacies in internal training. In addition to review, approval, and post-training feedback mechanisms, an electronic external training and business trip application system has been established to facilitate the management and promotion of external training.
- Each employee is offered a subsidy of NT\$20,000 – NT\$100,000, depending on the level of their position within the company, every two years for voluntary participation in training/study opportunities. Funds will be disbursed after training is completed. Employees planning to acquire licenses or certification are required to apply for approval and then to apply for funding after presenting proof of the successful acquisition of the desired license or certificate.
- ASE, Inc., the Group's subsidiary officially joined Responsible Business Alliance (RBA; formally named EICC) in 2015. It adheres to RBA's principles and philosophy of sustainable management and encourages ASE and its suppliers to jointly create a sustainable supply chain. In 2018, it continued to run training related to supply chains, fulfilling the RBA principles. Currently, more than 20,000 employees of the Kaohsiung plant of ASE Inc. have received RBA training. A yearly retraining mechanism has been set up and the latest regulatory information has been updated to employees. USI Inc., another subsidiary of the Group also follows the RBA codes of practice and currently, more than 2000 of its employees have received RBA training.

- The licenses and certifications required by the competent authority for ASE personnel whose duties are associated with financial information transparency are as follows: One internal auditors have acquired CPA certification. Three have been awarded Certified Internal Auditor certification. One has been awarded Information Systems Auditor certification by the Information Systems Audit and Control Association.
- In 2018, the Group spent NT\$ 24,595,533 on employee training.
- In 2018, the Group conducted over 1,960 training classes (including online courses) for 257 thousand trainees. The training totaled more tha 380 thousand man hours.
- The training courses conducted in 2018 included the following:
  - ◆ New employee training: new employee orientation training, basic training, and on-the-job training
  - ◆ Engineer training: problem analysis and engineering measurement skills
  - ◆ Managerial personnel training: executive trainee cultivation, mid- and high-level management skills, language proficiency, etc.
  - ◆ General training: courses conducted pursuant to government regulations and company policies
  - ◆ Competency training: Training in professional skills needed in different departments of the company

#### 5.5.4 Retirement System

- The Group established its employee retirement regulations and Employee Pension Reserve Supervision Committee in accordance with the Labor Standards Act. The earlier years of service of employees choosing to follow the new version of the pension regulations and employees opting to follow the old version are calculated according to the original employee pension payment regulations and appropriate amounts of the retirement pension reserve are appropriated and deposited into the designated account at the Bank of Taiwan. Retirement pension calculations are conducted by the Employee Pension Reserve Supervision Committee in accordance with the Labor Standards Act.
- The Group established new pension regulations based on the Labor Pension Act. Ever since, an amount equivalent to 6% of the pay of each employee has been appropriated and deposited into his or her personal account in the Labor Insurance Bureau. In addition, each employee can also choose to pay more into their pension fund within the range of 6%, and the entire amount that employees choose to pay voluntarily can be deducted when personal income tax is filed each year. Workers can apply for their pensions when they reach 60 years of age.
- In China subsidiary of the Group, according to the social insurance system of China, full specified amount insurance is appropriated into personal social security account for ensuring the rights and interests of staffs about retirement, outpatient service, serious illness treatment, maternity insurance, unemployment insurance and housing accumulation fund.
- For employees working for U.S. subsidiary of the Group, retirement regulation shall be based on U.S.A. 401K regulation. Employee can also voluntarily deposit fund into their retirement fund account from their salary based on legal limit and amount decided during the annual board of directors meeting. SPIL shall also deposit the allocated amount based on ratio into the employees personal retirement fund account.
- Retirement requirements: The Group sets its labor retirement requirements in compliance with the regulations of the Labor Standards Act and offers various types of golden handshake incentives by taking into accounts of the respective subsidiary of the Group.
- Preparations and making beautifully made retirement souvenirs to thank retiring employees for their years of service.

#### 5.5.5 Labor-Management Agreement

- The Company complies with relevant regulations and safeguards employees' rights and interests. It has written, telephone and electronic staff communication channels. Each factory regularly holds employee seminars. The employees can communicate with the company through the above channels to maintain The labor and management sides have a good and harmonious interaction, and ensure that the employees' rights and interests are treated fairly and reasonably, and there are no major labor disputes.
- Holding Labor-Management meetings regularly, listening to employee feedback and continuing to improve the benefit measures.

#### 5.5.6 Implementation of Employee Rights

- The Company implements its employee management policies in accordance with the Labor Standards Act and related labor regulations. Internal management regulations are updated to comply with changes made to government regulations to ensure that the rights and interests of employees are properly protected.
- According to the Act of Gender Equality in Employment, the company provides a work environment in which both genders are treated equally and sexual harassment is strictly forbidden.
- A regular employee communication mechanism has been set up to ensure that a good relationship between the employer and employees is maintained.
- ASE Inc., one of the Company's subsidiaries, has set up the ASE Employee Clinic in cooperation with Kaohsiung Veterans General Hospital, providing services of internal medicine, surgery, and health check. Furthermore, it has set up clinics of occupational medicine, cardiology, mental and physical stress management, smoking cessation, and oral cancer screening. Services of pap smear tests, breast ultrasonography, and abdominal ultrasonography are also available.
- Multiple breastfeeding rooms are available across its manufacturing plants. For the convenience of the employees in need, they are fully equipped, maintained and regularly cleaned.
- Massage Station is available in the plants where there are visually impaired massage therapists providing services for the health of the employees. Meanwhile, it's a way to provide stable employment to people with visual impairment.
- We arrange stress management group consultation and continue to train carers and build a safety net for interpersonal relationship.
- We organize talks on the soft power of various scales and stress-relieving handcraft activities.
- Compensation adjustment of the Group in 2018: The Group continues to adjust the wages of the employees in a stable way every year.

#### 5.5.7 Measures for Workplace Safety and Personal Safety of Employees (measures taken to prevent occupational accidents)

- The ISO22301 system has been fully built and implemented.
- Emergency responses of gathering and evacuating employees, ensuring all employees are covered. Information on onsite hazards has been published digitally.
- The Annual Exception Rate of Infrared Thermographer for Damage Protection has reduced by 50%.
- Improving the personnel operating traffic flow at the manufacturing plants.
- Enhancing and strengthening the safety of trolley operation and traffic flow.
- Increasing the safety and prevention capability in areas that contain highly toxic gas.
- Strengthening the safety of the scrubbers and cooling towers.
- Increasing the safety and protection of electric engineering personnel (EE) who conduct maintenance work at the automation machinery and equipment.
- Increasing, improving and implementing the safety level of EE maintenance.

- Increasing, improving and implementing the safety level of the thermal circuits of the thermal machines in the wet processes.
- Holding design competition of safety enhancement of the assembly and testing machines.
- Shaping a safety culture in the plants.
- Strengthening and refining the electronic plant access system of the contractors.
- Stepping up the capability of the contractor's safety management onsite.
- Building a cloud system of environmental safety of the assembly and testing processes.
- Designing a mobile version of the Safety Data Sheet (SDS) of the chemical operation.
- Building the second phase of the automatic surveillance and mobile patrol system.
- Reducing the ergonomic hazards of the finished-product operators by introducing the semi-automatic packing machines.
- Continuing to obtain certification of the management systems of ISO45001, TOSHMS, RBA, and OHSAS18001.
- Further plant health and safety performance evaluations and awards for plants with outstanding performance in health and safety management
- Enforcement of departmental hazard identification and risk evaluation, and improvements to departmental health and safety
- Facility injury rate is listed as a performance indicator
- To improve the unsafe environment such as pavement height difference, obstacles and protrusions to reduce the work injuries
- Theme-based safety promote and posts on the bulletin board to establish a sense of safety culture
- Facility safety and environment protection emergency response drill and inspection
- To Complete and get the RBA certification

#### 5.5.8 Employee code of conduct and ethical principles

- When having different opinions from supervisors, employees are not to feel personally slighted. Instead, they are encouraged to pick an appropriate time and location to communicate with their supervisors with sincerity, and to avoid strongly expressing their differing opinions in the presence of visitors or other outside parties.
- Employees are required to attend meetings on time or designate an agent in advance when unable to attend in person, ensure that the agent knows which documents to prepare, and also notify the convener of the meeting.
- If a meeting with suppliers spans lunch or dinner time, employees may order lunch for the suppliers and apply for reimbursement afterwards. Eating out and socializing with suppliers is prohibited.
- It is strictly forbidden to take company products, parts, and goods out of the processing zone. Release certificates are required for objects leaving the plant. Employees found in violation of the regulation will be subject to related regulations.
- Employees are expected to uphold the company's reputation. Without permission, no one may express his or her personal opinion to outside parties with regard to any company matter.
- As part of the corporate culture, all employees are expected to be honest and responsible and to adopt the highest ethical standard in all of the company's business activities.
- Employment ethics and moral regulations
- Rules to avoid conflict of Interest
- Gifts and presentation regulations
- Responsibility and Obligation report
- The company promotes the "sunshine bill" and its propose is for preventing a few people from accepting bribes, obtaining rebates, abusing of power, and from other

illegal behavior which will affect reputation and interests of the Company and the the employees and break up the trust of each other.

**5.5.9 Losses incurred by labor disputes(disputes between labor and management) in recent years as of the Date of this Annual Report (including potential disputes and appropriate countermeasures): None**

**5.6 Material Contracts**

| Contract Classification         | Contract Company                                                    | Contract Duration                                                                                                           | Main Contents                        | Term Limits                                                                                                                                                                                              |
|---------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Syndicated Loan Agreement       | 39 banks including Citibank                                         | 2018.04-2023.05                                                                                                             | Long-term NT\$ loan agreement        | Restrictions including financial ratio                                                                                                                                                                   |
| Manufacturing Plant Lease       | Advanced Semiconductor Engineering, Inc.(ASE)                       | 2018.05.01-2019.04.30                                                                                                       | Renting the Manufacturing Plant - K1 | During the effective lease period, the plant cannot be used for purposes that are not related to the business operations. In addition, the lease payment should be made as per the agreement.            |
| Patent License Agreement        | FUJITSU LIMITED                                                     | 1998.04.13-2019.04.12                                                                                                       | Patent Licensing                     | Within five years after the agreement is terminated or canceled, any disclosure of the terms and conditions set out in this agreement to any third party is not allowed (the Confidentiality Agreement). |
| Patent License Agreement        | FLIP CHIP INTERNATIONAL, LLC. (FOC/RDL) (ULCSP)                     | Mar. 7, 2008 - the expiry date of the licensed patent                                                                       | Patent Licensing                     | Until the agreement expires, terms and conditions are prohibited from disclosing to ant third party during the effective lease period. (Confidentiality clause)                                          |
| Patent License Agreement        | Infineon Technologies AG                                            | 2007.11.06-2019.11.05                                                                                                       | Patent Licensing                     | Until the agreement expires, terms and conditions are prohibited from disclosing to ant third party during the effective lease period. (Confidentiality clause)                                          |
| Patent License Agreement        | Infineon Technologies AG                                            | Apr. 11, 2013 - the expiry date of the licensed patent                                                                      | Patent Licensing                     | Terms and conditions are prohibited from disclosing to ant third party. (Confidentiality clause)                                                                                                         |
| Patent License Agreement        | Siliconware Precision Industries Co., Ltd. and its subsidiaries     | May 10, 2009 - the expiry date of the licensed patent                                                                       | Patent Licensing                     | Terms and conditions are prohibited from disclosing to ant third party. (Confidentiality clause)                                                                                                         |
| Land Lease                      | Processing and Export Processing Zone Administration Division, MOEA | 2013.02.01-2037.01.31                                                                                                       | Land Lease                           | During the effective lease period, the plant cannot be used for purposes that are not related to the business operations. In addition, the lease payment should be made as per the agreement.            |
| Technology and Patent Agreement | TDK Corporation                                                     | Starting from 2015.12.3 until patent rights and specialized knowledge related to the TKD SESUB technologies are eliminated. | Technology and Patent Agreement      | Terms and conditions are prohibited from disclosing to ant third party. (Confidentiality clause)                                                                                                         |

| Contract Classification                     | Contract Company                                   | Contract Duration       | Main Contents                                                                           | Term Limits                                                                                      |
|---------------------------------------------|----------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Technology Transfer and Licensing Agreement | DECA TECHNOLOGIES INC.                             | 2016.01.13-2026.01.13   | Technology and Patent Agreement                                                         | Terms and conditions are prohibited from disclosing to ant third party. (Confidentiality clause) |
| Engineering Construction                    | Acter                                              | 2018.01~2019.09         | Air-Conditioning and Partitioning of Plant (5 projects)                                 | None                                                                                             |
| Engineering Construction                    | Chung Yuang Electrical                             | 2018.03~2019.06         | M&E Engineering Construction Projects (3 projects)                                      | None                                                                                             |
| Engineering Construction                    | WELTREND TECH                                      | 2018.05~2018.12         | Plant Facilities Construction Project (1 project)                                       | None                                                                                             |
| Engineering Construction                    | SHENGYIFA                                          | 2018.05~2018.12         | Plant Facilities Construction Project (1 project)                                       | None                                                                                             |
| Equipment Sale                              | EVERSTAR                                           | 2018.09~2019.07         | Plant Facilities Construction Project (1 project)                                       | None                                                                                             |
| Equipment Lease                             | Global Asset Management                            | 2018.05~Lease Expiry    | Testing Equipment Lease (6 projects)                                                    | None                                                                                             |
| Equipment Lease                             | KEENHAMMER TECH                                    | 2018.01~Lease Expiry    | Testing Equipment Lease (11 projects)                                                   | None                                                                                             |
| Maintenance Contract                        | ADVANTEST                                          | 2018.01~2019.12         | Testing Equipment Software / Hardware Maintenance (2 projects)                          | None                                                                                             |
| Maintenance Contract                        | TERADYNE                                           | 2018.01~2019.12         | Testing Equipment Software / Hardware Maintenance (2 projects)                          | None                                                                                             |
| Engineering Construction                    | CHINA MCC20                                        | 2018.03~2019.05         | Plant Facilities Construction Projects for Siliconware Electronics (Fujian) (7 project) | None                                                                                             |
| Engineering Construction                    | Suzhou Gefco International Trading                 | 2018.08~2019.03         | M&E Engineering Construction Project for Siliconware Electronics (Fujian) (1 project)   | None                                                                                             |
| Patent License                              | Siliconware Technology (SuZhou) Limited            | 2017.01 ~ Patent Expiry | Acquisition of Patent License                                                           | None                                                                                             |
| Engineering Construction                    | China Construction First Building etc. 3 companies | 2017.12 ~ 2018.10       | Plant Facilities Construction Projects (8 projects)                                     | None                                                                                             |
| Strategic Investment                        | Jinjiang People's Government                       | 2017.05 ~ 2023.12       | SPIL (Jinjiang) Integrated Circuits Assembly and Testing Investment Agreement           | None                                                                                             |

| Contract Classification                                       | Contract Company                                               | Contract Duration                               | Main Contents               | Term Limits                                                                                      |
|---------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------|
| Joint Venture                                                 | Unigroup                                                       | 2017.11.15                                      | Joint Venture Agreement     | Restrictions On Equity Transfer                                                                  |
| Joint Share Exchange Agreement and the Supplemental Agreement | Advanced Semiconductor Engineering, Inc.                       | 2016.06 ~ 2018.10                               | Joint Share Exchange        | None                                                                                             |
| Easement Transfer Agreement                                   | Jinjiang City, Fujiang Province, China Bureau of Land Resource | 2017.10 ~ 2067.10                               | Acquisition of the Easement | None                                                                                             |
| Bank Loan                                                     | Mega International Bank                                        | 2016.12~202.12                                  | Medium & Long-Term Loan     | Sustain certain financial ratio                                                                  |
| Bank Loan                                                     | Bank of Taiwan, etc. 5 banks                                   | 2017.08~2023.10                                 | Medium & Long-Term Loan     | Sustain certain financial ratio                                                                  |
| Bank Loan                                                     | KGI Bank                                                       | 2018.12~2021.12                                 | Medium & Long-Term Loan     | Sustain certain financial ratio                                                                  |
| Bank Loan                                                     | Citi Bank, etc. 3 banks                                        | 2018.02~2019.11                                 | Short-Term Loan             | None                                                                                             |
| Bank Loan                                                     | HSBC Bank, etc. 2 banks                                        | 2018.03~2021.07                                 | Medium & Long-Term Loan     | None                                                                                             |
| Bank Loan                                                     | Mizuho Bank                                                    | 2018.04~2010.04                                 | Medium & Long-Term Loan     | None                                                                                             |
| Patent Agreement                                              | QUALCOMM Incorporated                                          | 2012.05.18 – expiration of all licensed patents | Patent licensing            | Terms and conditions are prohibited from disclosing to ant third party. (Confidentiality clause) |

## VI. Financial Highlights

### 6.1 Condensed Balance Sheet and Statements of Comprehensive Income for the Most Recent Five Fiscal Years

#### 6.1.1 Condensed Balance Sheet and Statements of Comprehensive Income — IFRSs

##### (1) Condensed Consolidated Balance Sheet

Unit: NT\$ in thousands

| Year \ Item                                                                   |                     | Financial Summary of the most recent five fiscal years* |             |             |             |             |
|-------------------------------------------------------------------------------|---------------------|---------------------------------------------------------|-------------|-------------|-------------|-------------|
|                                                                               |                     | 2018                                                    | 2017        | 2016        | 2015        | 2014        |
| Current Assets                                                                |                     | 201,558,875                                             | 144,938,272 | 142,789,659 | 156,732,840 | 159,955,190 |
| Financial Assets at Fair Value through other Comprehensive Income-non-current |                     | 1,597,323                                               | —           | —           | —           | —           |
| Available-for-sale Financial Assets-Non-current                               |                     | —                                                       | 1,123,006   | 1,028,338   | 924,362     | 941,105     |
| Investments Accounted for Using Equity Method                                 |                     | 9,277,389                                               | 48,689,265  | 49,816,593  | 37,141,552  | 1,492,441   |
| Property, Plant & Equipment                                                   |                     | 214,592,588                                             | 135,168,406 | 143,880,241 | 149,997,075 | 151,587,115 |
| Intangible Assets                                                             |                     | 80,216,341                                              | 11,341,359  | 12,107,570  | 11,888,612  | 11,913,286  |
| Other Assets                                                                  |                     | 26,128,687                                              | 22,597,478  | 8,300,078   | 8,321,759   | 8,095,630   |
| Total Assets                                                                  |                     | 533,371,203                                             | 363,857,786 | 357,922,479 | 365,006,200 | 333,984,767 |
| Current Liabilities                                                           | Before Distribution | 156,298,736                                             | 105,620,958 | 104,475,866 | 120,502,072 | 111,199,467 |
|                                                                               | After Distribution  | **                                                      | 182,488,333 | 115,891,064 | 132,978,851 | 126,789,292 |
| Non-Current Liabilities                                                       |                     | 156,401,923                                             | 54,235,348  | 84,119,837  | 76,365,603  | 64,347,296  |
| Total Liabilities                                                             | Before Distribution | 312,700,659                                             | 159,856,306 | 188,595,703 | 196,867,675 | 175,546,763 |
|                                                                               | After Distribution  | **                                                      | 236,723,681 | 200,010,901 | 209,344,454 | 191,136,588 |
| Shareholders' Equity Attributable to Shareholders of the Parent               |                     | 203,023,354                                             | 190,801,543 | 157,318,023 | 156,634,647 | 150,218,907 |
| Capital Stock                                                                 |                     | 43,217,144                                              | 87,380,787  | 79,568,040  | 79,185,660  | 78,715,179  |
| Capital Surplus                                                               | Before Distribution | 143,275,213                                             | 40,622,877  | 22,265,049  | 23,757,099  | 16,013,058  |
|                                                                               | After Distribution  | —                                                       | 12,035,123  | 22,265,049  | 23,757,099  | 16,013,058  |
| Retained Earnings                                                             | Before Distribution | 25,392,886                                              | 76,406,530  | 64,661,021  | 55,902,712  | 52,381,238  |
|                                                                               | After Distribution  | **                                                      | 28,126,909  | 53,245,823  | 43,425,933  | 36,791,413  |
| Other Equity                                                                  |                     | (6,902,782)                                             | (6,316,138) | (1,883,574) | 5,081,689   | 5,068,539   |
| Treasury Stocks                                                               |                     | (1,959,107)                                             | (7,292,513) | (7,292,513) | (7,292,513) | (1,959,107) |
| Non-controlling Interests                                                     |                     | 17,647,190                                              | 13,199,937  | 12,008,753  | 11,503,878  | 8,219,097   |
| Total Equity                                                                  | Before Distribution | 220,670,544                                             | 204,001,480 | 169,326,776 | 168,138,525 | 158,438,004 |
|                                                                               | After Distribution  | **                                                      | 127,134,105 | 157,911,578 | 155,661,746 | 142,848,179 |

\* : a.The Financial Statements of the most recent fiscal year have been audited and approved by CPA

b.Asset revaluation has not been conducted for the most recent financial year.

c.According to the Joint Share Exchange Agreement signed after the resolution the Boards of ASE and SPIL, ASE Holding Co., deemed as a restructured organization under mutual control of ASE and SPIL, is an assumption of ASE in reality. Therefore, all financial information before 2018 was based on the disclosure of the contents of ASE's consolidated financial statements.

\*\* : Up to the date of this annual report, the annual general meeting of 2019 fiscal year is yet to be held. Therefore, the amount after the distribution is excluded temporarily.



## (2) Condensed Parent Company Only Balance Sheet

Unit: NT\$ in thousands

| Year \ Item                                     |                     | Financial Summary of the most recent five fiscal years* |             |             |             |             |
|-------------------------------------------------|---------------------|---------------------------------------------------------|-------------|-------------|-------------|-------------|
|                                                 |                     | 2018                                                    | 2017        | 2016        | 2015        | 2014        |
| Current Assets                                  |                     | 99,192                                                  | —           | —           | —           | —           |
| Available-for-sale Financial Assets-Non-current |                     | —                                                       | —           | —           | —           | —           |
| Investments Accounted for Using Equity Method   |                     | 296,976,19                                              | 190,801,54  | 157,318,023 | 156,634,64  | 150,218,907 |
| Property, Plant & Equipment                     |                     | —                                                       | —           | —           | —           | —           |
| Intangible Assets                               |                     | —                                                       | —           | —           | —           | —           |
| Other Assets                                    |                     | —                                                       | —           | —           | —           | —           |
| Total Assets                                    |                     | 297,075,38                                              | 190,801,54  | 157,318,023 | 156,634,64  | 150,218,907 |
| Current Liabilities                             | Before Distribution | 44,152,029                                              | —           | —           | —           | —           |
|                                                 | After Distribution  | **                                                      | —           | —           | —           | —           |
| Non-Current Liabilities                         |                     | 49,900,000                                              | —           | —           | —           | —           |
| Total Liabilities                               | Before Distribution | 94,052,029                                              | —           | —           | —           | —           |
|                                                 | After Distribution  | **                                                      | —           | —           | —           | —           |
| Capital Stock                                   |                     | 43,217,144                                              | 87,380,787  | 79,568,040  | 79,185,660  | 78,715,179  |
| Capital Surplus                                 |                     | 143,275,213                                             | 40,622,877  | 22,265,049  | 23,757,099  | 16,013,058  |
| Retained Earnings                               | Before Distribution | 25,392,886                                              | 76,406,530  | 64,661,021  | 55,902,712  | 52,381,238  |
|                                                 | After Distribution  | **                                                      | 28,126,909  | 53,245,823  | 43,425,933  | 36,791,413  |
| Other Equity                                    |                     | (6,902,782)                                             | (6,316,138) | (1,883,574) | 5,081,689   | 5,068,539   |
| Treasury Stocks                                 |                     | (1,959,107)                                             | (7,292,513) | (7,292,513) | (7,292,513) | (1,959,107) |
| Total Equity                                    | Before Distribution | 203,023,354                                             | 190,801,54  | 157,318,023 | 156,634,64  | 150,218,907 |
|                                                 | After Distribution  | **                                                      | 142,521,92  | 145,902,825 | 144,157,86  | 134,629,082 |

\* : a. The Financial Statements of the most recent fiscal year have been audited and approved by CPA

b. Asset revaluation has not been conducted for the most recent financial year.

c. According to the Joint Share Exchange Agreement signed after the resolution the Boards of ASE and SPIL, ASE Holding Co., deemed as a restructured organization under mutual control of ASE and SPIL, is an assumption of ASE in reality. Therefore, all financial information before 2018 was based on the disclosure of the contents of ASE's consolidated financial statements.

\*\* : Up to the date of this annual report, the annual general meeting of 2019 fiscal year is yet to be held. Therefore, the amount after the distribution is excluded temporarily.

### (3) Condensed Consolidated Statement of Comprehensive Income

Unit: NT\$ in thousands

| Year \ Item                                                          | Financial Summary of the most recent five fiscal years* |             |             |             |             |
|----------------------------------------------------------------------|---------------------------------------------------------|-------------|-------------|-------------|-------------|
|                                                                      | 2018                                                    | 2017        | 2016        | 2015        | 2014        |
| Operating Revenue                                                    | 371,092,421                                             | 290,441,208 | 274,884,107 | 283,302,536 | 256,591,447 |
| Gross Profit                                                         | 61,163,050                                              | 52,732,271  | 53,187,185  | 50,135,228  | 53,588,529  |
| Profit from Operations                                               | 26,647,749                                              | 25,218,612  | 26,660,370  | 24,884,622  | 29,645,869  |
| Non-operating Income and Expenses                                    | 5,399,689                                               | 5,710,286   | 1,324,466   | 122,274     | (1,097,658) |
| Profit before Income Tax                                             | 32,047,438                                              | 30,928,898  | 27,984,836  | 25,006,896  | 28,548,211  |
| Net Profit from Continuing Operations                                | 26,463,839                                              | 24,667,366  | 22,893,463  | 20,167,650  | 24,281,585  |
| Net Profit for the Year                                              | 26,463,839                                              | 24,667,366  | 22,893,463  | 20,167,650  | 24,281,585  |
| Other Comprehensive Loss for the Year, Net of Income Tax             | (852,632)                                               | (4,600,345) | (7,959,259) | (147,547)   | 5,503,510   |
| Total Comprehensive Income for the Year                              | 25,611,207                                              | 20,067,021  | 14,934,204  | 20,020,103  | 29,785,095  |
| Net Profit Attributable to Owners of the Company                     | 25,262,356                                              | 22,987,819  | 21,643,156  | 19,197,516  | 23,636,522  |
| Net Profit Attributable to Non-controlling Interests                 | 1,201,483                                               | 1,679,547   | 1,250,307   | 970,134     | 645,063     |
| Total Comprehensive Income Attributable to Owners of the Company     | 24,662,096                                              | 18,730,355  | 14,275,709  | 19,124,449  | 28,802,296  |
| Total Comprehensive Income Attributable to Non-controlling Interests | 949,111                                                 | 1,336,666   | 658,495     | 895,654     | 982,799     |
| Earnings Per Share(Diluted)                                          | 5.84                                                    | 5.23        | 4.73        | 4.82        | 5.91        |

\* : a.The Financial Statements of the most recent fiscal year have been audited and approved by CPA

b.Asset revaluation has not been conducted for the most recent financial year.

c.According to the Joint Share Exchange Agreement signed after the resolution the Boards of ASE and SPIL, ASE Holding Co., deemed as a restructured organization under mutual control of ASE and SPIL, is an assumption of ASE in reality. Therefore, all financial information before 2018 was based on the disclosure of the contents of ASE's consolidated financial statements.

#### (4) Condensed Parent Company Only Statement of Comprehensive Income

Unit: NT\$ in thousands

| Year \ Item                                              | Financial Summary of the most recent five fiscal years* |             |             |            |            |
|----------------------------------------------------------|---------------------------------------------------------|-------------|-------------|------------|------------|
|                                                          | 2018                                                    | 2017        | 2016        | 2015       | 2014       |
| Operating Revenue                                        | 19,026,512                                              | 22,987,819  | 21,643,156  | 19,197,516 | 23,636,522 |
| Gross Profit                                             | 19,026,512                                              | 22,987,819  | 21,643,156  | 19,197,516 | 23,636,522 |
| Profit from Operations                                   | 18,821,044                                              | 22,987,819  | 21,643,156  | 19,197,516 | 23,636,522 |
| Non-operating Income and Expenses                        | 6,441,312                                               | —           | —           | —          | —          |
| Profit before Income Tax                                 | 25,262,356                                              | 22,987,819  | 21,643,156  | 19,197,516 | 23,636,522 |
| Net Profit from Continuing Operations                    | 25,262,356                                              | 22,987,819  | 21,643,156  | 19,197,516 | 23,636,522 |
| Net Profit for the Year                                  | 25,262,356                                              | 22,987,819  | 21,643,156  | 19,197,516 | 23,636,522 |
| Other Comprehensive Loss for the Year, Net of Income Tax | (600,260)                                               | (4,257,464) | (7,367,447) | (73,067)   | 5,165,774  |
| Total Comprehensive Income for the Year                  | 24,662,096                                              | 18,730,355  | 14,275,709  | 19,124,449 | 28,802,296 |
| Earnings Per Share(Diluted)                              | 5.84                                                    | 5.23        | 4.73        | 4.82       | 5.91       |

\* : a.The Financial Statements of the most recent fiscal year have been audited and approved by CPA.

b.Asset revaluation has not been conducted for the most recent financial year.

c.According to the Joint Share Exchange Agreement signed after the resolution the Boards of ASE and SPIL, ASE Holding Co., deemed as a restructured organization under mutual control of ASE and SPIL, is an assumption of ASE in reality. Therefore, all financial information before 2018 was based on the disclosure of the contents of ASE's consolidated financial statements.

CPA's opinion of the most recent five fiscal year:

| Year | CPA             | CPA             | Audit Opinion                                                                   |
|------|-----------------|-----------------|---------------------------------------------------------------------------------|
| 2018 | Jia-Ling Chiang | Cheng-Hung Kuo  | Unmodified opinion with emphasis of matter paragraph and other matter paragraph |
| 2017 | Jia-Ling Chiang | Chiu-Yen Wu     | Unmodified opinion                                                              |
| 2016 | Chen-Li Chen    | Jia-Ling Chiang | Unmodified opinion                                                              |
| 2015 | Chen-Li Chen    | Jia-Ling Chiang | Modified Unqualified Opinion                                                    |
| 2014 | Chen-Li Chen    | Jia-Ling Chiang | Unmodified opinion                                                              |

## 6.2 Financial Analysis for the Most Recent Five Fiscal Year

### 6.2.1 Consolidated and Parent Only Financial analyses for the the most recent five fiscal year — IFRSs

#### (1) Consolidated Financial Analysis

| Year \ Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                       | Consolidated Financial Analysis of the the most recent five fiscal year* |        |        |        |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------|--------|--------|--------|--------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                       | 2018                                                                     | 2017   | 2016   | 2015   | 2014   |
| Financial Structure (%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Debt Asset Ratio                                      | 58.63                                                                    | 43.93  | 52.69  | 53.94  | 52.56  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Long-term Fund to Property, Plant and Equipment Ratio | 175.72                                                                   | 191.05 | 176.15 | 156.25 | 141.05 |
| Liquidity Analysis (%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Current Ratio                                         | 128.96                                                                   | 137.22 | 136.67 | 130.07 | 143.85 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quick Ratio                                           | 97.46                                                                    | 103.58 | 91.53  | 87.09  | 101.06 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Times Interest Earned                                 | 10.06                                                                    | 18.43  | 13.62  | 12.02  | 13.28  |
| Operating Performance Analysis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Average Collection Turnover (times)                   | 5.51                                                                     | 5.46   | 5.72   | 5.79   | 5.34   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Days Sales Outstanding                                | 66                                                                       | 67     | 64     | 63     | 68     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Average Inventory Turnover (times)**                  | 10.15                                                                    | 10.38  | 9.83   | 10.74  | 11.14  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Average Payment Turnover (times)                      | 6.29                                                                     | 6.14   | 6.34   | 6.71   | 6.30   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Average Inventory Turnover Days                       | 36                                                                       | 35     | 37     | 34     | 33     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Property, Plant and Equipment Turnover (times)        | 2.12                                                                     | 2.08   | 1.87   | 1.88   | 1.81   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Total Assets Turnover (times)                         | 0.83                                                                     | 0.80   | 0.77   | 0.81   | 0.83   |
| Profitability Analysis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Return on Total Assets (%)                            | 6.53                                                                     | 7.24   | 6.84   | 6.31   | 8.44   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Return on Equity (%)                                  | 12.46                                                                    | 13.21  | 13.57  | 12.35  | 17.01  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Pre-tax Income to Paid-in Capital Ratio (%)           | 74.15                                                                    | 35.40  | 35.17  | 31.58  | 36.27  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Net Margin (%)                                        | 7.13                                                                     | 8.49   | 8.33   | 7.12   | 9.46   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Diluted Earnings Per Share (NT\$)                     | 5.84                                                                     | 5.23   | 4.73   | 4.82   | 5.91   |
| Cash Flow (%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Cash Flow Ratio                                       | 32.68                                                                    | 44.91  | 49.88  | 47.76  | 41.25  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Cash Flow Adequacy Ratio                              | 102.63                                                                   | 112.29 | 99.85  | 90.08  | 84.73  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Cash Flow Reinvestment Ratio                          | 5.80                                                                     | 7.34   | 8.42   | 9.39   | 8.80   |
| Leverage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Operating Leverage                                    | 2.66                                                                     | 2.21   | 2.16   | 2.24   | 1.94   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Financial Leverage                                    | 1.15                                                                     | 1.08   | 1.09   | 1.10   | 1.09   |
| Accounts for changes to financial ratios in the past two years: ASE Holding Co., deemed as a restructured organization under mutual control of ASE and SPIL, is an assumption of ASE in reality. The financial information of the year 2014 to 2017 discloses the contents of the consolidated financial statements of ASE. The calculation basis of financial ratios for the past two years differs because the financial reporting entities are not consistent, therefore the financial ratios are not capable to be compared and analyzed. |                                                       |                                                                          |        |        |        |        |

\*: a. The Financial Statements of the most recent fiscal year have been audited and approved by CPA.

b. Please refer to P125~127 Note1~Note 6

\*\*: The calculation of average inventory turnover doesn't include the operating costs of the inventory of the Real Estate Development – Land Held for Construction and Its Related Operating Costs.

(2) Parent Company Only Financial Analysis

| Year \ Item                    |                                                       | Consolidated Financial Analysis of the the most recent five fiscal year (Note 1) |        |        |        |        |
|--------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------|--------|--------|--------|--------|
|                                |                                                       | 2018                                                                             | 2017   | 2016   | 2015   | 2014   |
| Financial Structure (%)        | Debt Asset Ratio                                      | 31.65                                                                            | —      | —      | —      | —      |
|                                | Long-term Fund to Property, Plant and Equipment Ratio | —                                                                                | —      | —      | —      | —      |
| Liquidity Analysis (%)         | Current Ratio                                         | 0.22                                                                             | —      | —      | —      | —      |
|                                | Quick Ratio                                           | 0.19                                                                             | —      | —      | —      | —      |
|                                | Times Interest Earned                                 | 23.34                                                                            | —      | —      | —      | —      |
| Operating Performance Analysis | Average Collection Turnover (times)                   | —                                                                                | —      | —      | —      | —      |
|                                | Days Sales Outstanding                                | —                                                                                | —      | —      | —      | —      |
|                                | Average Inventory Turnover (times)( Note 2)           | —                                                                                | —      | —      | —      | —      |
|                                | Average Payment Turnover (times)                      | —                                                                                | —      | —      | —      | —      |
|                                | Average Inventory Turnover Days                       | —                                                                                | —      | —      | —      | —      |
|                                | Property, Plant and Equipment Turnover (times)        | —                                                                                | —      | —      | —      | —      |
|                                | Total Assets Turnover (times)                         | 0.07                                                                             | 0.13   | 0.13   | 0.12   | 0.17   |
| Profitability Analysis         | Return on Total Assets (%)                            | 10.72                                                                            | 13.20  | 13.78  | 12.51  | 17.30  |
|                                | Return on Equity (%)                                  | 12.82                                                                            | 13.20  | 13.78  | 12.51  | 17.30  |
|                                | Pre-tax Income to Paid-in Capital Ratio (%)           | 58.45                                                                            | 26.30  | 27.20  | 24.24  | 30.02  |
|                                | Net Margin (%)                                        | 132.77                                                                           | 100.00 | 100.00 | 100.00 | 100.00 |
|                                | Diluted Earnings Per Share (NT\$)                     | 5.84                                                                             | 5.23   | 4.73   | 4.82   | 5.91   |
| Cash Flow (%)                  | Cash Flow Ratio                                       | 85.14                                                                            | —      | —      | —      | —      |
|                                | Cash Flow Adequacy Ratio                              | 63.63                                                                            | —      | —      | —      | —      |
|                                | Cash Flow Reinvestment Ratio                          | 10.59                                                                            | —      | —      | —      | —      |
| Leverage                       | Operating Leverage                                    | 1.01                                                                             | 1.00   | 1.00   | 1.00   | 1.00   |
|                                | Financial Leverage                                    | 1.06                                                                             | 1.00   | 1.00   | 1.00   | 1.00   |

Accounts for changes to financial ratios in the past two years: ASE Holding Co., deemed as a restructured organization under mutual control of ASE and SPIL, is an assumption of ASE in reality. The financial information of the year 2014 to 2017 discloses the contents of the consolidated financial statements of ASE. The calculation basis of financial ratios for the past two years differs because the financial reporting entities are not consistent, therefore the financial ratios are not capable to be compared and analyzed.

Note 1: a. The Financial Statements of the most recent fiscal year have been audited and approved by CPA.

Note 2: Formulas for calculating the financial analysis items are listed as follows:

Computation Formulas:

1. Financial Structure

(1) Debt Asset Ratio = Total liabilities / Total assets.

(2) Long-term Fund to Property, Plant and Equipment Ratio= (total equity + non-current liabilities) / net property, plant and equipment.

2. Liquidity Analysis

(1) Current ratio = Current assets / Current liabilities.

(2) Quick ratio = (Current assets - Inventory - Prepaid expense) / Current liabilities.

(3) Times Interest Earned = Earnings before interest and taxes / Interest expenses.

### 3. Operating Performance Analysis

(1) Average Collection Turnover = Net sales / Average receivable balance (including accounts receivable and bills receivable arising from business operations).

(2) Days Sales Outstanding = 365 / Receivable turnover ratio.

(3) Average Inventory Turnover = Cost of goods sold / Average inventory.

(4) Average Payment Turnover = Cost of goods sold / Average payable balance (including accounts payable and bills payable arising from business operations).

(5) Average Inventory Turnover Days = 365 / Inventory turnover ratio.

(6) Property, Plant and Equipment Turnover = Net sales / Average net property, plant and equipment.

(7) Total Assets Turnover = Net sales / Average total assets.

### 4. Profitability Analysis

(1) Return on Total Assets = [Net income after tax + Interest expenses × (1 – tax rate)] / Average total assets.

(2) Return on Equity = Net income after tax / Average total equity.

(3) Net Margin = Net income after tax / Net sales.

(4) Earnings Per Share = (Net income attributable to equity holders of the Company - Preferred dividend) / Weighted average number of shares outstanding.<sup>3</sup>

### 5. Cash Flow

(1) Cash Flow Ratio = Net cash flows from operating activities / Current liabilities.

(2) Cash Flow Adequacy Ratio = Five-year sum of cash from operations / Five-year sum of capital expenditures, inventory additions, and cash dividends.

(3) Cash Flow Reinvestment Ratio = (Cash flows from operating activities – Cash dividends) / (Gross property, plant and equipment + Long-term investments + Other noncurrent assets + Working capital).<sup>4</sup>

### 6. Leverage:

(1) Operating Leverage = (Net sales – Variable cost and expense) / Operating income.<sup>5</sup>

(2) Financial Leverage = Operating income / (Operating income – Interest expenses) °

Note 3: The following factors are to be included for consideration for the calculation of earnings per share:

1. It is based on the weighted average common stock shares instead of the outstanding stock shares at year-end.
2. For capitalization with cash or treasury stock trade, the stock circulation must be included for consideration to calculate weighted average stock shares.
3. For capitalization with retained earnings and capital surplus, the earnings per share calculated semi-annually and annually must be adjusted retroactively and proportionally to the capitalization but without considering the issuance period of the capitalization.
4. If preferred stock shares are nonconvertible and cumulative, the dividend of the year (whether it is distributed or not) shall be deducted from net income or added to the net loss. If preferred stock shares are not cumulative, preferred stock dividend shall be deducted from net income after tax if there is any but it needs not be added to net loss after tax if there is any.

Note 4: The following factors are to be included for consideration for the analysis of cash flow:

1. Net cash flow from operating activities refers to the net cash provided by operating activities on the Statement of Cash Flows.
2. Capital expenditure refers to the annual cash used in investing activities.
3. Increase of inventory is counted only when ending inventory exceeds beginning inventory. If the ending inventory is decreased, it is counted as zero value.
4. Cash dividend includes the amount for common stock and preferred stock.
5. Gross Property, plant and equipment meant for the total Property, plant and equipment before deducting the accumulated depreciation.

Note 5: Issuers shall have the operating cost and operating expenses been classified into the category of fixed and variable. If the classification of operating cost and operating expense involves estimation or discretionary judgment, it must be made reasonably and consistently.

Note 6: For company shares are without par value or the par value are not equivalent to NT\$10, the aforementioned calculation of paid-in capital ratio is calculated on the equity attributable to shareholders of the parent company on the balance sheet.

### **6.3 Supervisors' or Audit Committee's Review Report for the Most Recent Fiscal Year**

#### **Audit Committee's Review Report**

The Board of Directors has prepared and submitted the Group's 2018 Business Report, Financial Statements, and Profit Distribution Proposal to the Audit Committee for review. The Financial Statements have been audited by Deloitte & Touche, and a report has been issued. We have reviewed each of the aforementioned documents, and have not found any inaccuracies. Therefore, the Audit Committee hereby submits this report in compliance with Article 14-4 of the Securities and Exchange Act and Article 219 of the Company Act.

ASE Technology Holding Co., Ltd.

Convener of the Audit Committee: Sheng-Fu You

March 28, 2019



**6.4 Financial Statement of the Most Recent Fiscal Year:** Please refer to “Annual Report (II) Financial Statements”.

**6.5 Parent Company Only Financial Statements for the Most Recent Fiscal Year Certified by CPA:** Please refer to “Annual Report (II) Financial Statements”.

The Company’s consolidated financial statements are prepared in accordance with the *Regulations Governing the Preparation of Financial Reports by Securities Issuers* (revised version) as well as the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), International Financial Reporting Interpretations Committee (IFRIC) Interpretations, and Standing Interpretations Committee (SIC) Interpretations (hereinafter referred to as the “Taiwan IFRS”), approved and released by the Financial Supervisory Commission (hereinafter abbreviated as FSC), and reported to the FSC Securities and Futures Bureau. Similarly, the Company’s consolidated financial statements are prepared in accordance with IFRS, IAS, IFRIC, and SIC (hereinafter abbreviated as “IFRS”), released by the International Accounting Standards Board (ISAB), and reported to the U.S. Securities and Exchange Commission.

The Company prepares consolidated financial statements in accordance with both Taiwan IFRS and IFRS. The differences between the two standards are caused by the timing differences on the recognition of the 5% corporation income tax imposed on retained earnings.

For detailed adjustment, please refer to our English Consolidated Financial Report of 2018 which was reported to the U.S. Securities and Exchange Commission

<https://www.sec.gov/Archives/edgar/data/1122411/000095010319005149/0000950103-19-005149-index.htm>

| Unit: NT\$ in thousands                                                  |             |             |
|--------------------------------------------------------------------------|-------------|-------------|
| Differences Adjusted Items                                               | Taiwan IFRS | IFRS        |
| (1) Consolidated net profit attributable to the owners of the company    | 25,262,356  | 26,220,721  |
| (2) Consolidated net profit attributable to non-controlling interests    | 1,201,483   | 1,203,588   |
| (3) Total comprehensive income attributable to the owners of the company | 24,662,096  | 25,620,461  |
| (4) Total comprehensive income attributable to non-controlling interests | 949,111     | 951,216     |
| (5) Basic earnings per share (in NT\$)                                   | 5.95        | 6.18        |
| (6) Diluted earnings per share (in NT\$)                                 | 5.84        | 6.07        |
| (7) Total assets                                                         | 533,371,203 | 534,061,927 |
| (8) Total liabilities                                                    | 312,700,659 | 315,034,005 |
| (9) Non-controlling interests                                            | 17,647,190  | 17,639,487  |
| (10) Equity attributable to the owners of the Company                    | 203,023,354 | 201,388,435 |

**6.6 The Impact of Cash Flow Difficulties of the Company and Its Affiliates: None**

## VII. Financial Status, Operating Results, and Risk Management

### 7.1 Financial Status: Major Causes of changes in assets, liabilities, and equity of the past two fiscal years and their impact, and future countermeasures against material impacts

The Company was newly established on April 30, 2018, hence there's no information available in the previous year to carry out comparison and make explanation.

### 7.2 Financial Performance: Major Causes of changes in operating revenue, profit from operations and profit before income tax of the past two fiscal years, the estimation of sales and its basis, and the possible effects and the countermeasures regarding the Company's financial outlook

The Company was newly established on April 30, 2018, hence there's no information available in the previous year to carry out comparison and make explanation.

### 7.3 Cash Flow: Analysis of the cash flow in the most recent fiscal year, liquidity improvement plan, and cash flow analysis for the following year

#### 7.3.1 Analysis of cash flow changes for the most recent fiscal year

The negative growth in Cash Flow Ratio, Cash Flow Adequacy Flow, and Cash Reinvestment Ratio is because the Company was established on Apr. 30, 2018 under the Joint Share Exchange Agreement and that the Company, in fact, an assumption of Advanced Semiconductor Engineering, Inc. (hereinafter referred to as ASE). The aforementioned agreement specifies that each common stock of Siliconware Precision Industries Co., Ltd. can be swapped with NT\$ 51.2, and such a deal has impacts on the liability account and resulted in the aforementioned negative growth.

#### 7.3.2 Remedial measures for cash deficit: The Company has not had any status of insufficient liquidity in the most recent fiscal year.

#### 7.3.3 Cash flow analysis for the following year

Unit: NT\$ in thousands

| Cash balance at the beginning of the year<br>①                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Estimated annual net cash provided by operating activities<br>② | Estimated annual cash outflow<br>③ | Estimated cash surplus (deficit)<br>① + ② - ③ | Remedial measures for estimated cash deficit |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------|-----------------------------------------------|----------------------------------------------|----------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                 |                                    |                                               | Investment plan                              | Financing plan |
| \$51,518,436                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | \$71,949,903                                                    | \$37,762,696                       | \$85,705,643                                  | —                                            | —              |
| 1. Analysis of changes in cash flow<br>(1) Operating activities: Mainly from the increase of profit from operations and net cash inflows from net changes in operating assets and liabilities for the 2019 fiscal year.<br>(2) Investing activities: Estimated purchases of machinery and equipment and plant expansion for the 2019 fiscal year<br>(3) Financing activities: Estimated loans, payments of short- and long-term liabilities, and profit allocation for the 2019 fiscal year<br>2. Remedial measures for estimated cash deficit and liquidity analysis: not applicable |                                                                 |                                    |                                               |                                              |                |

### 7.4 Material Capital Expenditures in the Most Recent Fiscal Year and Their Impact on Financial and Business Operations:

The company has not had any material capital expenditure in the most recent fiscal year.

## **7.5 Investment Policy in the Most Recent Fiscal Year, Main Causes for Profits or Losses under the policy, Improvement Plan, and Investment Plans for the Following Year:**

The reinvestment policy of the Company in the most recent fiscal year is mainly oriented around the core competitiveness of the Company and focused on the long-term strategic goal. All of our investment projects were implemented after careful evaluation. The profits of the Company's current reinvestment can be attributed mainly to the fact that the production and operation of the invested business have reached the economic scale and that the management system has been put into practice.

## **7.6 Risk Management:**

7.6.1 Impacts of any fluctuation of interest rates and exchange rates and inflation on Company's profit(loss) during the current fiscal year up to the date of publication of the annual report, and the future countermeasures:

The Company was established through shares exchange. The principal asset is long-term investment and its profits and losses comes from the recognized profits and losses of the invested company. Since the invested companies have appropriate countermeasures for fluctuation of interest rates and exchange rates and inflation and has kept the flexible adjustments and capital movement. Therefore, the aforementioned fluctuation and inflation shall not create significant impacts on the Company.

### **1. Fluctuation of Interest Rates**

The Group maintains appropriate flexible scheduling adjustments and obtains an interest rate that was better than the market rate when it obtains the loan at all times in response to cash positions required for operating activities. In the future, we will continue to pay close attention to interest rate trends, aim for favorable interest rate conditions when it finances capitals, use low-interest financing instruments and adopt favorable interest rate conditions to maintain low financing costs and adequately-funded financing quotas to avoid interest rate risks that may arise from operations.

### **2. Fluctuation of Exchange Rates**

The hedging strategy of the Group is based on the principle of natural hedging. The Group utilizes the foreign-denominated debt to counterbalance its position of foreign currency assets and invests in low-risk and high-risk investment targets to lower the risks of fluctuation of exchange rates. In the future, the Group will pay attention to changes in international economic events and market exchange rates, and continue to reduce the risk of exchange rate fluctuations as the main management direction. We will also carefully review the company's fund allocations in a timely manner, in response to the impact of exchange rate changes, and achieve effective management objectives.

### **3. Inflation status:**

According to the statistics of the Directorate-General of Budget, Accounting and Statistics (DGBAS) of Executive Yuan, the Consumer price index annual growth rate of 2018 is -0.05%, which indicates that the inflation did not have significant effect to the operating result of 2018.

The Group has not experienced any significant impact on profit or loss as a result of inflation as of now. In the future, in addition to paying close attention to the changes in the market prices, the Group will keep a good relationship with its suppliers and clients, in order to adequately adjust the product pricing and stocks of the product material. With such approaches, the impact of inflation on the Group shall be effectively minimized.

7.6.2 Policies on high-risk, highly leveraged investments, lending funds to other parties, endorsements, guarantees, and financial derivative transactions, main reasons for the profits or losses generated thereby, and future response measures to be undertaken:

The Group has adopted conservative strategies and has not taken part in any high-risk and highly leveraged investment. The Group has formulated internal management guidelines and operating procedures on the basis of robust financing and operation according to the relevant laws and regulations of Securities and Futures Bureau, Financial Supervisory Commission (FSC), which include “Procedures for Lending Funds to Other Parties”, “Procedures for Making Endorsements and Guarantees”, and “Procedures for Acquisition or Disposal of Assets”. The Company will continue to strictly follow these procedures and protocols and all transactions are conducted in accordance with the relevant regulations. The subsidiaries that the Company reinvested in have applied conservative operating strategies and have not taken part in any high-risk or highly leveraged investment.

7.6.3 Future R&D plans and projected investment schedules and R&D expenses:

1. Investment :

The company’s main business projects are long-term investments; there are currently no R&D needs.

2. Assembly and Testing :

Future R&D projects (including those that are ongoing)

(1) Future R&D projects (including those that are ongoing)

Assembly Technology

| Advanced Technology |                                                       |
|---------------------|-------------------------------------------------------|
| 3D SiP              | 1. Si Photonic SiP Technology                         |
|                     | 2. Thin Core FC PoP Technology                        |
|                     | 3. Heterogeneous Chip Integration SiP                 |
|                     | 4. 2.nD Fine Line/Space Substrate Stacking            |
|                     | 5. Panel Level Fan-Out/PoP Technology                 |
|                     | 6. 2.5D Molding Solution                              |
|                     | 7. Advance Fan-Out Multi-Layer Stack Via Solution     |
|                     | 8. 2.5D Package Grinding Tech                         |
|                     | 9. Wafer Level 3D Fan-Out F2F Dual-Side Packaging     |
|                     | 10. D2W Hybrid Bonding Cu to Cu, Oxide to Oxide       |
|                     | 11. Double Side Molded Module Plus/DSM+ Structure     |
|                     | 12. 3D Stacking SiP Module                            |
|                     | 13. Thin & High Bandwidth PoP                         |
|                     | 14. 2.5D/ 3D IC on 72.5mm x70mm Large Size FCBGA      |
|                     | 15. 2.5D/ 3D IC with 4H/8H HBM(High Bandwidth Memory) |
|                     | 16. Ultra-Thin Double Side SiP                        |
| OEP                 | 1. Optical Sensor Packaging Solution                  |
|                     | 2. Optical-Electronic Interconnection                 |
|                     | 3. Si-Photonics LD Module                             |
|                     | 4. Mini-LED Packaging                                 |
|                     | 5. Optical Wire Bond Finger Print Sensor Packaging    |

| Advanced Technology         |                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------|
| Large Panel Fan out Package | 1. Chip First (Panel Fan out Chip First Packaging 300x300, 450x450, 600x600mm)                        |
|                             | 2. Chip Last(Panel Fan out Chip Last Packaging 300x300mm)                                             |
|                             | 3. Panel Fan Out Chip last FOCoS300x300mm with Small Ball Mount                                       |
| WLCSP                       | 1. FO – Panel Platform Assembly                                                                       |
|                             | 2. Extremely-Thin WLCSP                                                                               |
|                             | 3. 300mm Wafer 2D Fan-Out WLP                                                                         |
|                             | 4. 3D Fan-Out WLP                                                                                     |
|                             | 5. Fine Line Cu-Plated RDL Technology                                                                 |
|                             | 6. Low Temperature Cure Polymer,Cu-Plated RDL Technology                                              |
|                             | 7. Sawn Wafer Probing                                                                                 |
|                             | 8. High IO/Die Shrinkage WLCSP                                                                        |
|                             | 9. IR Through BSL                                                                                     |
|                             | 10.L/S Technology Development                                                                         |
|                             | 11.Development of Thin-Film Crystal Back Bonding Technology                                           |
|                             | 12.Reduce Cutting Process Risk Technology Development                                                 |
|                             | 13.5-layer Polymer,Cu-Plated RDL Technology                                                           |
| Flip Chip                   | 1. 20 nm ELK Wafer Lead-Free FC                                                                       |
|                             | 2. 300mm TSV Wafer 50 um CMP Technology                                                               |
|                             | 3. SD Laser Technology on Thin ELK Wafer                                                              |
|                             | 4. Molded Core Embedded Package                                                                       |
|                             | 5. Exposed Mold UnderFill                                                                             |
|                             | 6. Very Fine Pitch Cu Pillar Flip Chip Product                                                        |
|                             | 7. Development and Application of Copper Bump in Embedded (Flip Chip Packaging Technology Below 16nm) |
|                             | 8. FC QFN Development                                                                                 |
|                             | 9. Ultra Thin WB-SFCCSP                                                                               |
|                             | 10. FCCSP with LSD(Land Side Die)                                                                     |
|                             | 11. 5G Antenna FCCSP with LSD(Land Side Die)                                                          |
|                             | 12. 77.5mm x 77.5mm Large Size FCBGA)                                                                 |
|                             | 13. 2.1D FCBGA with L/S:2/2um                                                                         |
|                             | 14. Antenna FCBGA with LSD(Land Side Die)                                                             |
|                             | 15. Wafer Thinning Technology to 50um for 12” Wafers                                                  |
|                             | 16. (LAB(Laser Assisted Bonding)                                                                      |
|                             | 17. Flip Chip Technology on 5nm ELK Wafer                                                             |
| RF Module                   | 1. Irregular FC Cu-Pillar Multi-Band Multi-Mode SiP Module Solution                                   |
|                             | 2. Embedded Passive Substrate Wireless Module                                                         |
|                             | 3. Compartment Shielding Technology                                                                   |
|                             | 4. mmWave Module)                                                                                     |
|                             | 5. FOSiP (Fan-out System in Package                                                                   |
|                             | 6. mmWave Antenna in Package/AiP                                                                      |
| Wire Bond Package           | 1. 14 nm Cu / ELK Wafer Wire Bond Solution                                                            |
|                             | 2. New Wire Bonding Material Technology Development                                                   |
|                             | 3. Single Layer Carrier Package Development                                                           |

| Advanced Technology               |                                                                                  |
|-----------------------------------|----------------------------------------------------------------------------------|
|                                   | 4. FC QFN for ATV Development                                                    |
|                                   | 5. High Thermal_HS Evaluation                                                    |
|                                   | 6. Cap on Die                                                                    |
|                                   | 7. Gas Sensor                                                                    |
|                                   | 8. 40um Linear Pitch, Cu Wire Bonding                                            |
|                                   | 9. Wire Bond Technology on 14nm ELK Wafer                                        |
| Wireless Module                   | 1. 5G Antenna in Package                                                         |
|                                   | 2. Wireless RF Module of Selective Mold & Partial EMI Coating                    |
| Wireless Communication SiP Module | 1. Multiple Mode Communication SiP Module Solution                               |
|                                   | 2. Highly Miniaturized and Integrated SiP Communication Function Module Solution |
|                                   | 3. LTE Cat.M Modem SiP Module                                                    |
|                                   | 4. WiFi SESUB Module                                                             |
|                                   | 5. Hybrid SBT Antenna                                                            |
|                                   | 6. PMIC & Wireless SiP Module of 3D Structure                                    |
| Bumping                           |                                                                                  |
| Plating                           | 1. Low Ag of Sn/Ag Lead-Free Micro Bump Plating Technology                       |
|                                   | 2. Single PI and Single RDL For WLCSP                                            |
|                                   | 3. Micro Cu Pillar Bumping                                                       |
|                                   | 4. RDL+LF Bump                                                                   |
|                                   | 5. RDL+Cu Pillar                                                                 |
|                                   | 6. FOCoS_Cu Pillar                                                               |
|                                   | 7. Bumping on 5nm ELK Wafer                                                      |

## Test Technology

| New Test Technology |                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------|
| Wafer Probe         | 1. Wafer Level Package Testing Technology                                                 |
|                     | 2. High Parallel Site Test Solution                                                       |
|                     | 3. GaN Wafer Probe Testing Technology                                                     |
| Final Test          | 1. Low Cost Non-ATE Test Methodology For Low I/O Count Device Test , IoT/Wearable Devices |
|                     | 2. High UPH Power Management IC Tester Development                                        |
|                     | 3. Multi-Channel Multi-Function, and Multi-Process SIP Tester Development                 |
|                     | 4. High Channel Density SOC Tester Development                                            |
|                     | 5. Hardware Module Controlled Platform and Common Tester User Interface Development       |
|                     | 6. High Pin Count High Performance Digital Testing Module Development                     |
|                     | 7. 300A Programmable Power Supply Module)                                                 |
|                     | 8. mmWave AiP Function Test Solution                                                      |
|                     | 9. Low-Cost SiP Test Platform)                                                            |
|                     | 10. In-Process SiP Test Solution                                                          |
|                     | 11. Geometric Optical Sensors Test Solutions                                              |
|                     | 12. Automatic Strip-Level Functional Tests                                                |
|                     | 13. SiP FoCoS Device OS Testing Technology                                                |

| New Test Technology |                                                                     |
|---------------------|---------------------------------------------------------------------|
|                     | 14. SiP Sub-6G Antenna OTA Testing Technology                       |
|                     | 15. SiP Sub-6G Multi-Band Testing Technology                        |
|                     | 16. SiP Sub-6G RF OS Testing Technology                             |
|                     | 17. SiP Sub-6G RF Front-End Module Testing Technology               |
|                     | 18. SiP Computing ARM/MCU Module Testing Technology                 |
|                     | 19. SiP Hybrid RF(Front-End+Antenna) Module Testing Technology      |
|                     | 20. SiP Hybrid IoT (ARM+Front-End) Module Testing Technology        |
|                     | 21. SiP Hybrid AoP/AiP Module Testing Technology                    |
|                     | 22. GaN Product Application Testing Technology                      |
|                     | 23. TPMS Test Technology                                            |
|                     | 24. Biometric Sensor                                                |
|                     | 25. Facial Recognition Sensor Test Technology                       |
|                     | 26. 3D Sensing Test Technology                                      |
|                     | 27. FPCB Module Test Technology                                     |
|                     | 28. ALS+Prox.Sensor Test Solution                                   |
|                     | 29. LiDAR Sensing Testing Solution                                  |
|                     | 30. Biometric Sensor Testing Solution                               |
|                     | 31. 3D Sensing Testing Solution                                     |
|                     | 32. GaN Application Package Testing Technology                      |
|                     | 33. Advance Process, 5G Antenna In Package Measurement              |
|                     | 34. Advance Process, 24GHz RF Car Radar Measurement                 |
|                     | 35. High Frequency 40 GHz RF IC Socket Measurement                  |
| Test Data Analysis  | 1. Big Data Analysis/Mining System Build                            |
|                     | 2. Process Information Automation Management & Deep Learning System |
|                     | 3. Cu Plating Equipment Health Diagnostic Monitoring System         |
|                     | 4. Data Cloud Dashboard Development                                 |
|                     | 5. AI Embedded Trace Pattern Sorting Technology                     |
| Wafer Saw           | 1. Plasma Dicing                                                    |
|                     | 2. Remote Plasma                                                    |
|                     | 3. SiC/GaN Wafer Die Saw Tech                                       |

(2) Expected R&D reinvestment expenditures

The estimated R&D expenditures for trial assembly production and other assembly operations are NT\$ 954,406 thousand and NT\$ 8,589,652 thousand, respectively.

The estimated R&D expenditures for testing production and other testing operations are NT\$167,038 thousand and NT\$873,639 thousand, respectively.

(3) Main factors to make a significant success in R&D in the future

- Development of advanced packaging technology and integration with existing packaging technology
- Implementing optimal solutions to lower the cost of existing assembly and testing technology
- Standardization of processes (including manufacturing processes) and integration into industry chains
- Prompt verification and mass production of new key equipment
- Planning and development of assembly, testing, substrate, module, and system integration capabilities

- Planning and development of substrate, component, and module design capabilities
- Putting complete product R&D processes and project management systems in place
- Ensuring compatibility of newly-developed products with existing production equipment to reduce R&D costs
- Adoption of customer-oriented organizational setup and internal operating mechanisms
- Understanding of market supply and demand; development of advanced packaging, substrates, module assemblies, and testing technologies based on market trends to ensure our dominant position in the field; and implementing optimal solutions for providing customers with new products in a timely manner
- Upgrading mechanisms for developing talented R&D personnel
- Implementing and improving knowledge management systems
- Improving and managing intellectual property rights strategies
- Design, research and development, and manufacture of eco-design products that are in compliance with environmental protection regulations
- Control of R&D results, risks, schedules, and personnel
- Formation of strategic alliances with customers to reduce R&D costs and risks
- Co-design of ICs-packages-systems
- Planning and development of testing and development capabilities
- Planning and development of core R&D development capabilities
- Development of advanced substrates to ensure our dominant position in the field

### 3. Electronics Manufacturing Services

#### (1)Future R&D Plan (including plans in proceeding) and Major Reasons to Compete Successfully for Future R&D :

| Products and Solutions | Future R&D Plan and Major Reasons to Compete Successfully for Future R&D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wireless Communication | <ol style="list-style-type: none"> <li>1. WiFi 802.11ax/UWB 802.15.4a/5G mmWave RF+AoP SIP Module:<br/>Establish accurate simulation database and product correlation verification, to optimize and solve problems. Reduce development cycle times and costs.</li> <li>2. System on Module<br/>Integrates most of the system's features and uses miniaturization and rugged design technology to accelerate development time for customer end products</li> <li>3. NB-IoT module<br/>The development of a narrowband IoT module can be deployed directly on the LTE network, or even the leader of 5G Technology and LPWA Low Power Wide Area Network best solution.</li> <li>4. IoT device<br/>Select IoT applications and develop related devices to reduce development time with own modules</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Storage & Computer     | <ol style="list-style-type: none"> <li>1. Edge server / Rack server for Datacenter, Enterprise and Telecom:<br/>Integrate the server, WiFi/LTE 5G and Ethernet Switch technology, and implement on DataCenter and City automation application with software virturlization technology. The product meet the Telecom requirement of support NEBS(Network Equipment Building System).</li> <li>2. High-compatibility modularized IoT Gateway Product:<br/>USI IoT Gateway can support WiFi (802.11ac and 802.11abgn) and , smart home protocols like Zigbee and ZWave. It can support long range remote connection protocols like LoRa ,LTE and NBIoT as well. Therefore, it is suitable for various use-case scenario such as smart building, smart city, smart manufacturing, smart healthcare, smart home, smart logistics, and smart agriculture etc. On the other hand, Modularized design will help customer to customized the system with different platform, different sensors and different transparent communication to help customer qualificate the system soon and spped up the time to market.</li> <li>3. Intel Thunderbolt3 Dock:<br/>New Intel solutions have integrated Thunderbolt3 technology and will have more peripherals and devices support this function. Also meet USB Type-C standard design, can support the needs and application of high-speed transmission and increase the</li> </ol> |



| <b>Products and Solutions</b> | <b>Future R&amp;D Plan and Major Reasons to Compete Successfully for Future R&amp;D</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | <p>convenience of customer applications.</p> <p>4. Sub-function Module Card (Subcard):<br/>Utilize UGSI's advanced miniaturization technology and combine great x86 design experience to provide smaller function circuitry. Customer product design made easy and flexible to add more functions and save cost from the saved space.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Industrial Products           | <p>1. Rugged Smart Handheld Device:<br/>Product integrates with multiple wireless function and can support various user scenarios. Design team has complete HW, SW and RF design capability and experience. Design process adopts SI/PI, thermal simulation and also conduct design qualification to have good design quality. Strong and experienced mechanical team with required capability and skill so designed product can support required harsh environment. Flexible working model can meet various customer's operation requirement.</p> <p>2. Always Connected IoT Device with WoS (Windows on Sanpdragon):<br/>Design team has compete and experienced HW, SW and RF design capability. Is the only selected strategic partner by Microsoft and Qualcomm in IoT application by using Windows On Snapdragon.</p> <p>3. Build up the biometric device- fingerprint, IRIS, facial recognitions integration capability Real project's implementation:<br/>Pre-buildup the intergation &amp; application capability of the biometric device of consumer cell phone for industrial mobiity devices development.</p> |
| Consumer                      | <p>Wearable System Multi-Dies Integrated Packaging Solution:<br/>Integrate dies with different functions in a single chip and develop production test programs. Such as the ability to significantly reduce the size of the part, will be a great contribution to the space requirements of the product. The main innovation is that the dies produced by different companies can be packaged according to the needs of the customers, so that the system space can be optimized and more functions can be put in a limited space.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Car Electronics               | <p>1. Telematics technology development<br/>Automotive grade mixed circuit (high frequency signal, Analog signal, RF signal...etc) design and verification.</p> <p>2. High accuray LED position Mounting capability:<br/>LED hedlamp peneration rate will be 27% in 2021 and it is a must to bw with this capability. USI already introduce 2 projects with high accuracy LED position. Currenly, there are more opportunity for USI to win more projects with this capability.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Miniaturization & Automation  | <p>1. Miniaturization Technology Development:<br/>Develop new equipment and new material ,plus simulation result to conduct new process technology implementation.</p> <ol style="list-style-type: none"> <li>PCB double side molding</li> <li>New EMI shielding design and Mfg. process development</li> <li>5G product/component design and Mfg. process development</li> <li>3D SiP design and Mfg. process development</li> </ol> <p>2. Smart Manufacturing Development:<br/>Make use of Cloud Computing technology, data from sensors and historical data to realize digital twin concept. And, moreover, utilize artificial intelligence technologies for optimization and problem solving.</p>                                                                                                                                                                                                                                                                                                                                                                                                                     |

(2) Expected R&D reinvestment expenditures :

The research and development expenses expected to be invested in 2019 are about NT\$5.3 billion.

7.6.4 The changes of domestic and overseas important policies and laws and its impact on the Company's financial operations, and the countermeasures

- According to Regulations Governing the Preparation of Financial Reports by Securities Issuers and IFRS 16 - Leases recognized by FSC and applicable in 2019, the Company has opted to recognize the cumulative effects of changes on the first applicable date and will

not prepare the comparison information. Furthermore, with respect to the impacts of IFRSs that have been published by International Accounting Standards Board (IASB) but not recognized by FSC, the Company will continue to evaluate these impacts on consolidated financial reports according to the timeline set out by FSC and complete them within the estimated timeline.

2. The Company Act: The Company Act has been amended significantly on Aug. 1, 2018. The Company has made relevant compliant adjustment in response to the regulatory changes, in order to follow relevant regulations.

3. EU's General Data Protection Regulation (GDPR): GDPR was officially implemented on May 25, 2018. The Company has conducted necessary control over personal data protection and internal propaganda to avoid any infringement.

#### 7.6.5 Potential Impacts of Disruptive Technology and Industry Change on Corporate Finance and Business and Their Countermeasures:

1. The uncertainty and discontinuity of the global economy are major obstacles challenging the semiconductor industry. ASE Technology Holding Co., Ltd. works with its vendors to develop adaptive measures to meet customer needs and reduce costs and risks; continues to observe market conditions and maintains close communication with its customers to identify changing customer needs; and strengthens the collection and analysis of market information to decrease the impact of changes in product demand on its technologies.

2. Competitiveness and time to market are key factors determining the success of new technology R&D. ASE Technology Holding Co., Ltd. has adopted the following measures: fully understanding market trends; dynamic supply and demand information; development of key technology and patents based on market trends and customer product blueprints of representative customers to ensure its dominant position; and ensuring that new products are compatible with existing production equipment to reduce R&D costs and provide optimal time-to-market solutions.

3. Development funds and new key equipment play a crucial role in new technology innovation and R&D. ASE Technology Holding Co., Ltd. exercises the following measures: ensuring that new technologies are in line with ASE Technology Holding Co., Ltd.'s blueprint for the future; actively forming strategic alliances with customers to facilitate resource sharing and lower R&D risk; paying regular visits to industry-leading customers; and hosting technical seminars to plan product blueprints and specifications with representative customers to ensure that R&D technologies meet customer needs.

4. The semiconductor industry has a rapid technology changeover cycle. The Group will collect and analyze market information, and interact closely with customers to understand customer demand and changes. This will enable the Group to complete technology development and commercialize it in time to reduce the impact of technology change on operations.

The semiconductor industry is an industry that fluctuates according to the economic cycle. Any downturn in the economy can have a negative effect on the industry. The management team of the Group will closely monitor industry changes at all times, and take appropriate preventive measures at the appropriate time to lower the impact of industry changes on company operations.

#### 7.6.6 Potential Impacts of Changes in Corporate Image on Corporate Crisis Management and Their Countermeasures:

For the implementation about the CSR and Corporate Image, please refer to Page 41 of this annual report.

#### 7.6.7 Anticipated Benefits and Potential Risks of Mergers and Acquisitions and Their Countermeasures:

1. The Company was established on Apr. 30, 2018 as a result of a joint share exchange

between Advanced Semiconductor Engineering, Inc. (hereinafter referred as ASE) and Siliconware Precision Industries Co., Ltd. (hereinafter referred as SPIL). In the meantime, the Company owns 100% of the shares of ASE and SPIL. These two subsidiaries are hierarchically equal. Through constructive competition and co-opetition, they respectively enhance its operating efficiency, economic scale, and performance of R&D and innovation. Together they work toward the objectives of creating a platform of win-win and mutual support, strengthening the capability of competition, increasing the service quality provided to the clients, generating stockholders' equity, and enhancing the benefits of their employees. It's expected that these will all have a positive influence on the book value per share and earnings per share.

2.To integrate resources and increase the operating efficiency, ASE, the Company's subsidiary, conducted share swap with USI Inc., a company that ASE holds 99.17% of its shares, in accordance with Article 30 of the Business Mergers And Acquisitions Act upon on the resolution of the Board of Directors on Jul. 30, 2018. On Sep. 3, 2018, the share swap was completed. USI Inc. became the subsidiary of ASE that ASE holds 100% share ownership of USI. Besides, to integrate resources and enhance the operating efficiency, Universal Global Scientific Industrial Co., Ltd. (hereinafter referred to as UG-TW), indirectly held 74.67% of the shares by the Company, conducted share swap with Universal Scientific Industrial Co., Ltd (hereinafter referred as USI-TW), which holds its 99.67% of shares, upon the resolution of the Board of Directors on Jul. 30, 2018 in accordance with Article 30 of the Business Mergers And Acquisitions Act. On Jan. 24, 2019, the share swap was completed. USI-TW became the subsidiary of UG-TW that UG-TW owns 100% of the shares of USI-TW. In a case where the aforementioned share swap help achieves resource integration and enhance operating effectiveness, it will be reasonable to expect that it will have a positive influence on the book value per share and earnings per share of the Company.

#### 7.6.8 Anticipated Benefits and Potential Risks of Capacity Expansion and Their Countermeasures:

As the outlook of the semiconductor industry is optimistic, it's estimated that the growth in 2019 in the assembly and testing business groups of the Group will greatly exceeds that in 2018. Regarding investment, in consideration of fully and effectively utilizing existing productivity, the production capacity well expanded a few years ago has been able to partially meet the growth in orders. To uplift the real rate of return and lower the investment risk, the Company will meet the market growth mainly by the existing production capacity and equipment except that the Company must expand to meet the huge demands and to ensure the market share in Mainland China. For the investment in new equipment, unless there are needs to invest in new equipment for new plants, the Company will closely observe the market trends and strengthen its customer relationship to stabilize any changes in the orders, so that capacity utilization is effective. The new investment will be considered when there is necessity to meet the market demands. In addition, as the future of the EMS market looks bright and the customer demands increase, the subsidiaries of the Company will plan for investment in new production capacity and equipment under the principle of having fully utilized the existing production capacity. At the same time, the Company will continue to monitor the actual demands of the market, flexibly increase or decrease its investment so that the real rate of return can be increased and investment risks lowered.

#### 7.6.9 Potential Risks of Concentrated Procurement and Sales, and Countermeasures:

There is no excessive concentration of procurement or sales of products amid the subsidiaries of the Group.

#### 7.6.10 Potential Impacts and Risks of the Sales or Transfers of Significant Numbers of Shares by the Company's Directors, Supervisors, or Major Shareholders Holding More Than 10% of Outstanding Shares and Their Countermeasures: None

7.6.11 Potential Impacts and Risks of Changes of Management Right and The Countermeasures: None

7.6.12 Litigations and Non-Litigated Incidents:

1. Concerning the Securities and Exchange Act case involving Tien Wu, the director and COO of the Company, the Kaohsiung District Prosecutors Office filed a public prosecution on Aug. 6, 2017. The case is now being tried by the Kaohsiung District Court.
2. On Oct. 26, 2018, the Securities and Futures Investors Protection Center filed a lawsuit to the Company and Tien Wu, the director and COO of the Company to dismiss Tien Wu from her duties as a director of the Company pursuant to the Securities Investor and Futures Trader Protection Act. The case is now being tried by the Ciaotou District Court.

7.6.13 Other Material Risks and Their Countermeasures: None

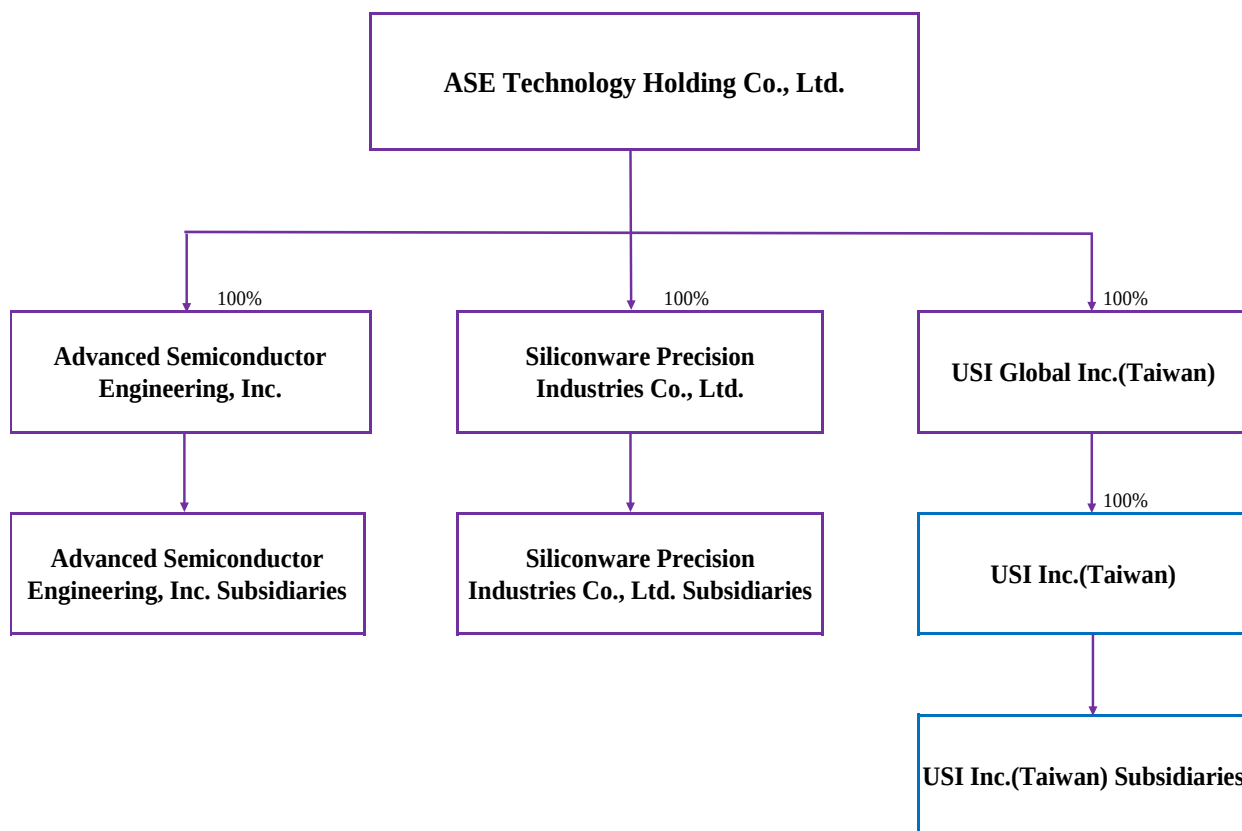
**7.7 Additional Information: None**

## VIII. Special Disclosures

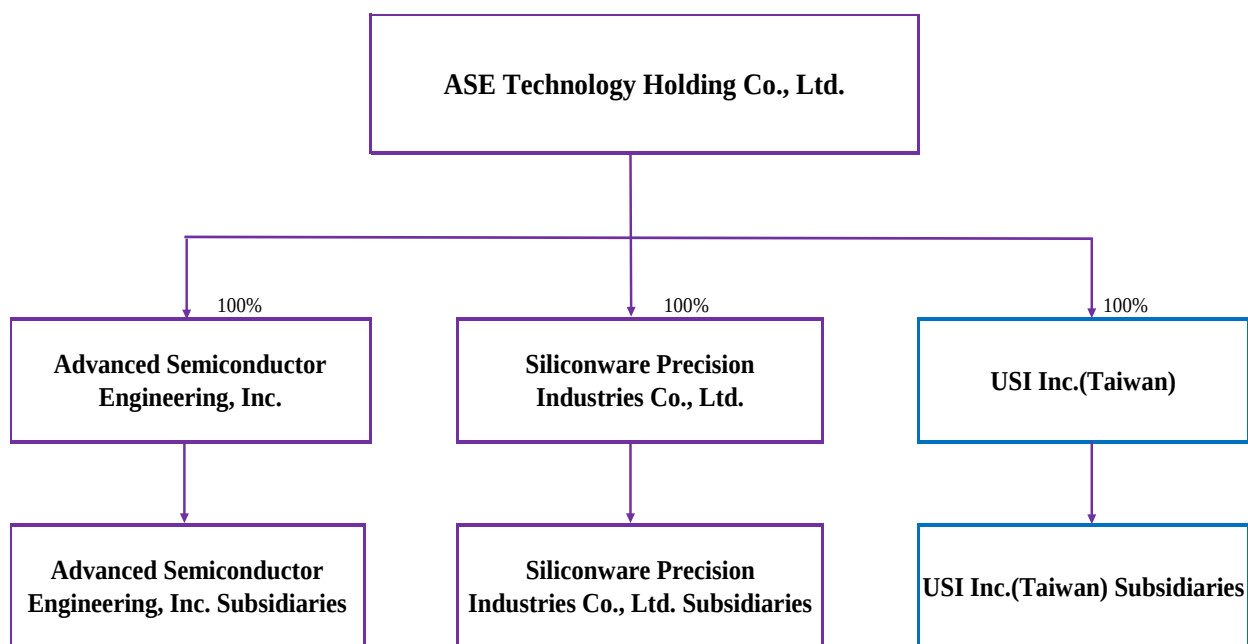
### 8.1 Chart of affiliated businesses

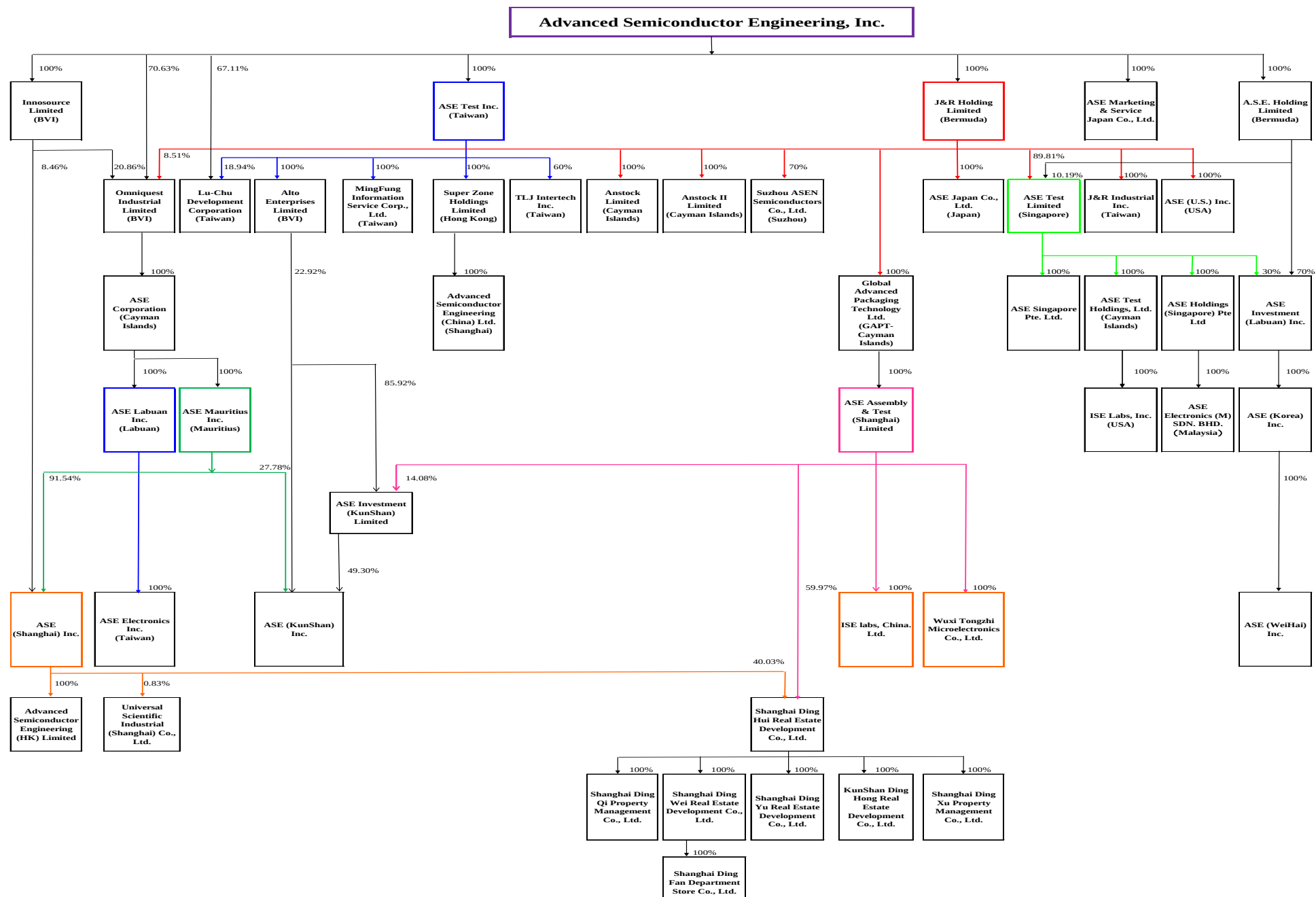
#### 8.1.1 Affiliated Organizational Chart

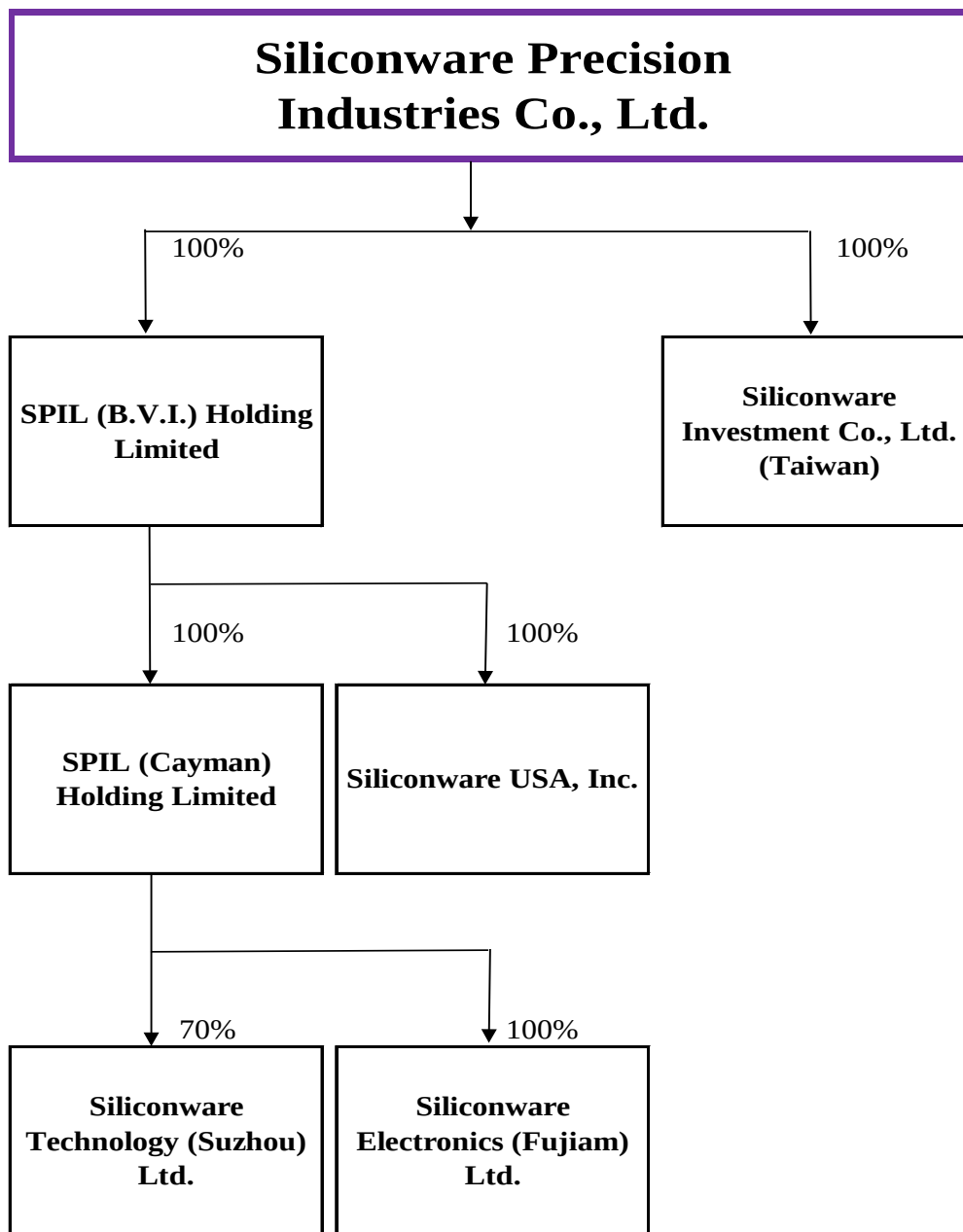
(2018.12.31)

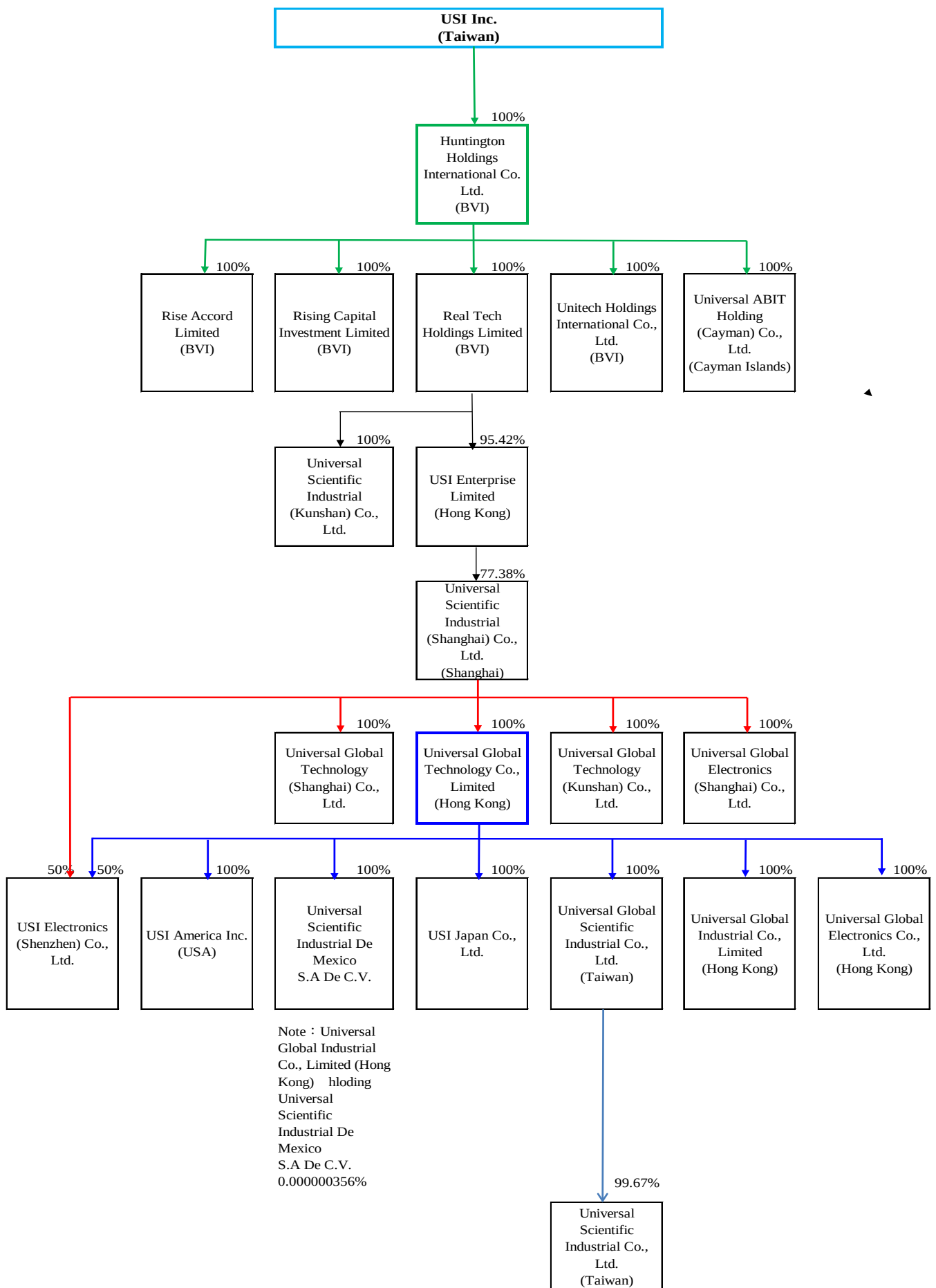


(2019.02.28)











### 8.1.2 List of Affiliated Companies

| Company                                         | Date of Incorporation | Address                                                                                                      | Share Capital (in thousands) | Business Activities                                                                           |
|-------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------|
| ASE Technology Holding Co., Ltd.                | Apr., 2018            | No. 26, Jinshan Road, Nanzhi Export Processing Zone, Kaohsiung City                                          | NT\$43,217,144               | Professional investment                                                                       |
| Advanced Semiconductor Engineering, Inc.        | Mar., 1984            | No. 26, Jinshan Road, Nanzhi Export Processing Zone, Kaohsiung City                                          | NT\$55,287,838               | Manufacturing, assembly, processing, testing, and sales of integrated circuits                |
| Siliconware Precision Industries Co., Ltd.      | May, 1984             | No. 123, Sec. 3, Da Fong Rd., Tantz, Taichung 427, Taiwan, R.O.C.                                            | NT\$33,917,489               | Manufacturing, assembly, processing, testing, and sales of integrated circuits                |
| USI Inc.                                        | Apr., 2015            | No. 141, Alley 351, Taiping Road Sec. 1, Caotun Township, Nantou County                                      | NT\$17,573,344               | Professional investment activities                                                            |
| A.S.E. Holding Limited                          | Feb., 1990            | Canon's Court, 22 Victoria Street, Hamilton HM 12, Bermuda                                                   | NT\$7,915,000 (US\$243,966)  | Professional investment                                                                       |
| J&R Holding Limited                             | Dec., 1995            | Canon's Court, 22 Victoria Street, Hamilton HM 12, Bermuda                                                   | NT\$13,907,259 (US\$435,128) | Professional investment                                                                       |
| Innosource Limited                              | Jun., 2001            | P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands                     | NT\$2,770,696 (US\$86,000)   | Professional investment                                                                       |
| Omniquest Industrial Limited                    | Sep., 2000            | P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands                     | NT\$11,457,298 (US\$354,704) | Professional investment                                                                       |
| ASE Marketing & Service Japan Co., Ltd.         | Nov., 2003            | Sumitomo Fudosan Shinyokohama Bldg., 10F, 2-5-5, Shinyokohama, Kohoku-ku, Yokohama, Kanagawa, Japan 222-0033 | NT\$18,298 (¥60,000)         | Marketing and customer service                                                                |
| ASE Test Inc.                                   | Dec., 1987            | No. 10, West 5th Street, Nanzhi Export Processing Zone, Kaohsiung City                                       | NT\$11,314,525               | Semiconductor testing services                                                                |
| Lu-Chu Development Corporation                  | Dec., 2004            | 19F., No. 333, Keelung Road Sec. 1, Xinyi District, Taipei City                                              | NT\$1,966,344                | Real estate development                                                                       |
| TLJ Intertech Inc.                              | Dec., 2000            | 5F., No. 475, Guangfu South Road, Xinyi District, Taipei City                                                | NT\$35,318                   | Information software services                                                                 |
| MingFung Information Service Corp., Ltd.        | May, 2018             | 19th Floor, Room 1912, No. 333, Section 1, Keelung Road, Xinyi District, Taipei City                         | NT\$30,000                   | Information software services                                                                 |
| Alto Enterprises Limited                        | Mar., 2010            | P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands                     | NT\$5,709,330 (US\$188,000)  | Professional investment activities                                                            |
| Super Zone Holdings Limited                     | Jun., 2008            | 1408 World-Wide House, 19 Des Voeux Road Central, Hong Kong                                                  | NT\$3,082,400 (US\$100,000)  | Professional investment activities                                                            |
| ASE (KunShan) Inc.                              | Aug., 2004            | No. 373, Songnan Road, Qiandeng Town, Kunshan City, Jiangsu Province                                         | NT\$8,945,404 (US\$288,000)  | Semiconductor assembly and testing services                                                   |
| ASE Investment (Kunshan) Limited                | May, 2012             | No. 373, Songnan Road, Qiandeng Town, Kunshan City, Jiangsu Province                                         | NT\$4,312,518 (US\$142,000)  | Professional investment activities                                                            |
| Advanced Semiconductor Engineering (China) Ltd. | Jul., 2010            | Room T3-10-202, No. 5001, Huadong Road, Pudong New Area, Shanghai City                                       | NT\$3,149,000 (US\$100,000)  | Semiconductor assembly and testing, after sales service, consulting service and plant leasing |
| ASE Investment (Labuan) Inc.                    | Jun., 1999            | Lot 2 & 3, Level 3, Wisma Lazenda, Jalan Kemajuan, 87000 Labuan, F.T. Labuan, Malaysia                       | NT\$7,277,867 (US\$240,947)  | Professional investment                                                                       |
| ASE Test Limited                                | Dec., 1995            | 1 Marina Boulevard #28-00 One Marina Boulevard, Singapore (018989)                                           | NT\$659,075 (US\$27,356)     | Professional investment                                                                       |
| ASE (Korea) Inc.                                | Mar., 1967            | 76, Saneopdanji-gil, Paju-si, Gyeonggi-do, Korea                                                             | NT\$3,031,771 (US\$97,976)   | Semiconductor assembly and testing services                                                   |
| J&R Industrial Inc.                             | Apr., 1999            | No. 107, Neihuan North Road, Nanzhi Export Processing Zone, Kaohsiung City                                   | NT\$1,700,000                | Leasing and investment                                                                        |
| ASE Japan Co., Ltd.                             | May, 2004             | 1863, Iryuda, Takahata-machi, Higashiokitama-gun, Yamagata, 992-0324, Japan                                  | NT\$105,802 (¥360,000)       | Semiconductor assembly and testing services                                                   |

| Company                                             | Date of Incorporation | Address                                                                                                              | Share Capital (in thousands)   | Business Activities                                                                            |
|-----------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------|
| ASE (U.S.) Inc.                                     | Dec., 1983            | 1255 E. Arques Ave. Sunnyvale, CA 94085, USA                                                                         | NT\$649 (US\$20)               | Marketing and customer service                                                                 |
| Global Advanced Packaging Technology Limited        | Oct., 2000            | PO Box 309, Ugland House, Grand Cayman, KY1-1104 Cayman Islands                                                      | NT\$6,119,380 (US\$190,000)    | Professional investment                                                                        |
| ASE (Weihai) Inc.                                   | Dec., 2001            | No. 16-1, Hainan Road, Export Processing Zone, Weihai Economic and Technological Development Zone, Shandong Province | NT\$5,115,481 (US\$172,200)    | Semiconductor assembly and testing services                                                    |
| Suzhou ASEN Semiconductors Co., Ltd.                | May, 2001             | No. 188, Suhong West Road, Suzhou Industrial Park, Jiangsu Province                                                  | NT\$1,568,467 (US\$48,672)     | Semiconductor assembly and testing services                                                    |
| Anstock Limited                                     | Mar., 2011            | PO Box 309, Ugland House, Grand Cayman, KY1-1104 Cayman Islands                                                      | NT\$303 (US\$10)               | Professional financial management                                                              |
| Anstock II Limited                                  | Jul., 2014            | PO Box 309, Ugland House, Grand Cayman, KY1-1104 Cayman Islands                                                      | NT\$300 (US\$10)               | Professional financial management                                                              |
| ASE (Shanghai) Inc.                                 | Dec., 2001            | No. 2300, Jinke Road, Zhangjiang Hi-Tech Park, Shanghai                                                              | NT\$4,349,312 (US\$148,496)    | LED manufacturing, diode display manufacturing, and printed circuit board production and sales |
| ASE Corporation                                     | Mar., 2006            | PO Box 309, Ugland House, Grand Cayman, KY1-1104 Cayman Islands                                                      | NT\$11,425,922 (US\$352,784)   | Professional investment                                                                        |
| ASE Mauritius Inc.                                  | Apr. 2006             | 608, St. James Court, St. Denis Street, Port Louis, Republic of Mauritius.                                           | NT\$7,046,629 (US\$217,800)    | Professional investment                                                                        |
| ASE Labuan Inc.                                     | Mar. 2006             | Labuan F.T. Malaysia                                                                                                 | NT\$4,099,954 (US\$126,184)    | Professional investment                                                                        |
| Shanghai Ding Hui Real Estate Development Co., Ltd. | Aug., 2005            | Room 602A-04, Building 2., No. 351, Guoshoujing Road, Pudong New Area, Shanghai City                                 | NT\$16,345,070 (RMB 3,600,000) | Real estate project development, property management                                           |
| Shanghai Ding Qi Property Management Co., Ltd.      | Jan., 2015            | Room 160, No. 772, Qinzhou Road, Xuhui District, Shanghai City                                                       | NT\$5,078 (RMB 1,000)          | Real estate brokerage, property management                                                     |
| Advanced Semiconductor Engineering (HK) Limited     | Apr., 2008            | RMS 2702-3 ,27/F Bank of EAST ASIA Harbor view Centre, 56 Gloucester RD, Wan Chai ,HK                                | NT\$32,130 (US\$1,000)         | Trading activities                                                                             |
| Shanghai Ding Wei Real Estate Development Co., Ltd. | Oct., 2009            | Room 338, Building 1., No. 270, Caoxi Road, Shanghai City                                                            | NT\$8,061,489 (RMB 1,798,000)  | Real estate development and management, property management                                    |
| Shanghai Ding Yu Real Estate Development Co., Ltd.  | Mar., 2010            | Room E192, No. 48, Jinjiu Road, Baoshan District, Shanghai City                                                      | NT\$4,936,538 (RMB 1,100,000)  | Real estate development and management, property management                                    |
| Shanghai Ding Fan Department Store Co., Ltd.        | Jul., 2016            | Room D468, No. 588, Tianlin East Road, Xuhui District, Shanghai City                                                 | NT\$7,199 (RMB 1,500)          | Department store trade                                                                         |
| Kunshan Ding Hong Real Estate Development Co., Ltd. | Feb., 2012            | Room 2, No. 25, Shengxiang South Road, Qiandeng Town, Kunshan City, Jiangsu Province                                 | NT\$3,139,662 (RMB 670,000)    | Real estate development and management, property management                                    |
| Shanghai Ding Xu Property Management Co., Ltd.      | Jun., 2017            | Room 750, Building 1, No. 1658, Zhang Dong Road, No. 169 Shengxia Road, Pilot Free Trade Zone, Shanghai              | NT\$22,860 (RMB 5,000)         | Property management                                                                            |
| ASE Electronics Inc.                                | Mar., 2006            | No. 73, Kaifa Road, Nanzhi Export Processing Zone, Kaohsiung City                                                    | NT\$3,989,819                  | Electronic materials wholesale, electronic materials retail, international trade               |
| ASE Test Holdings, Ltd.                             | Apr., 1999            | PO Box 309, Ugland House, Grand Cayman, KY1-1104 Cayman Islands                                                      | NT\$0.162 (US\$0.005)          | Professional investment                                                                        |
| ASE Holdings (Singapore) Pte Ltd                    | Dec., 1994            | 10, Hoe Chiang Road, #17-02 Keppel Towers, Singapore                                                                 | NT\$1,633,708 (SG\$71,429)     | Professional investment                                                                        |
| ASE Singapore Pte. Ltd.                             | Feb., 1998            | 2 Woodlands Loop Singapore 738074                                                                                    | NT\$984,851 (US\$30,056)       | Semiconductor assembly and testing services                                                    |
| ISE Labs, Inc.                                      | Nov., 1983            | 46800 Bayside Parkway Fremont, CA94538, U.S.A                                                                        | NT\$852 (US\$26)               | Semiconductor testing services                                                                 |
| ASE Electronics (M) Sdn.                            | Feb., 1991            | Plot 20, Phase IV, Bayan Lepas Free                                                                                  | NT\$2,019,907                  | Semiconductor assembly and testing                                                             |

| Company                                              | Date of Incorporation | Address                                                                                                                               | Share Capital (in thousands)   | Business Activities                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bhd.                                                 |                       | Industrial Zone, 11900 Bayan Lepas, Penang                                                                                            | (US\$62,260)                   | services                                                                                                                                                                                                                                                                                                                                                                                                         |
| ASE Assembly & Test (Shanghai) Limited               | Dec., 2000            | No. 669, Guoshoujing Road, Zhangjiang Hi-Tech Park, Shanghai City                                                                     | NT\$6,501,336 (US\$203,580)    | Semiconductor assembly and testing services                                                                                                                                                                                                                                                                                                                                                                      |
| ISE labs, China. Ltd.                                | Oct., 2018            | 6F, No. 669, Guoshoujing Road, Pilot Free Trade Zone, Shanghai                                                                        | NT\$222,231 (RMB\$50,000)      | Semiconductor testing services                                                                                                                                                                                                                                                                                                                                                                                   |
| Wuxi Tongzhi Microelectronics Co., Ltd.              | Mar., 2010            | Plant 29-B, Parcel No. 52, No. 21, Mingjiang Road, New District, Wuxi City, Jiangsu Province                                          | NT\$356,682 (RMB 73,461)       | Semiconductor assembly and testing services                                                                                                                                                                                                                                                                                                                                                                      |
| SPIL(B.V.I.) Holding Limited                         | Dec., 2000            | Flemming House, Wickhams Cay, P.O. Box 662, Road Town, Tortola, British Virgin Islands                                                | NT\$5,776,396 (US\$179,400)    | Professional investment                                                                                                                                                                                                                                                                                                                                                                                          |
| Siliconware Investment Co., Ltd                      | Nov., 2015            | 9F, No. 105, Section 2, Dunhua South Road, Daan District, Taipei City                                                                 | NT\$667,694                    | Professional investment                                                                                                                                                                                                                                                                                                                                                                                          |
| Siliconware USA, Inc.                                | Mar., 1996            | 1735 Technology Drive, #300, San Jose, CA 95110, USA.                                                                                 | NT\$37,844 (US\$1,250)         | Marketing services in North America                                                                                                                                                                                                                                                                                                                                                                              |
| SPIL(Cayman) Holding Ltd.                            | Jan., 2002            | 89 Nexus Way, Camana Bay, Grand Cayman, KY1-1205 Cayman Islands                                                                       | NT\$5,765,816 (US\$181,200)    | Professional investment                                                                                                                                                                                                                                                                                                                                                                                          |
| Siliconware Technology (Suzhou) Limited              | Dec., 2001            | 288 Fengli Street, Suzhou Industrial Park, Suzhou, Jiangsu, China                                                                     | NT\$5,608,532 (US\$159,577)    | Assembly and testing services                                                                                                                                                                                                                                                                                                                                                                                    |
| Siliconware Electronics (Fujian) Co., Limited        | Jul., 2017            | 2nd Floor, Jinding Charity Building, No. 28, Luoshan Section, Fuxing West Road, Luoshan Street, Jinjiang City, Fujian Province, China | NT\$2,741,950 (US\$90,000)     | Assembly and testing services                                                                                                                                                                                                                                                                                                                                                                                    |
| USI Global Inc.                                      | Nov., 2018            | No. 141, Alley 351, Taiping Road Sec. 1, Caotun Township, Nantou County                                                               | NT\$300,000                    | Professional investment activities                                                                                                                                                                                                                                                                                                                                                                               |
| Huntington Holdings International Co. Ltd.           | Oct., 1996            | Drake Chambers, Tortola, British Virgin Islands                                                                                       | NT\$8,370,606 (US\$255,857)    | Holding company                                                                                                                                                                                                                                                                                                                                                                                                  |
| Unitech Holdings International Co. Ltd.              | Oct., 1996            | P.O. Box 3321 Road Town, Tortola, BVI                                                                                                 | NT\$93,495 (US\$3,000)         | Holding company                                                                                                                                                                                                                                                                                                                                                                                                  |
| Real Tech Holdings Limited                           | Mar., 2000            | Trust Net Chambers, P.O. Box3444, Road Town, Tortola, B.V. I.                                                                         | NT\$4,832,906 (US\$149,151)    | Holding company                                                                                                                                                                                                                                                                                                                                                                                                  |
| Universal ABIT Holding Co., Ltd.                     | Feb., 2006            | Marquee Place, Suite 300, 430 West Bay Road P.O. Box 30691 SMB, Grand Cayman, Cayman Islands, British West Indies.                    | NT\$906,249 (EUR 3,800)        | Holding company                                                                                                                                                                                                                                                                                                                                                                                                  |
| Rising Capital Investment Limited                    | Nov., 2010            | Drake Chambers, Tortola, British Virgin Islands                                                                                       | NT\$176,940 (US\$6,000)        | Holding company                                                                                                                                                                                                                                                                                                                                                                                                  |
| Rise Accord Limited                                  | May, 2011             | Drake Chambers, Tortola, British Virgin Islands                                                                                       | NT\$57,730 (US\$2,000)         | Holding company                                                                                                                                                                                                                                                                                                                                                                                                  |
| Universal Scientific Industrial (Kunshan) Co., Ltd.  | Aug., 2005            | North Side, Central Avenue, East Side, Huangpujiang Road, Qiangeng Town, Kunshan City, Jiangsu Province                               | NT\$383,201 (US\$12,000)       | Production of computer-aided systems, wireless network communication cards, and high-performance motherboards; sales of self-produced products                                                                                                                                                                                                                                                                   |
| USI Enterprise Limited                               | Nov., 2007            | Rooms 2702-3, 27th Floor, Bank of East Asia Harbor View Centre, 56 Gloucester Road, Wan Chai, Hong Kong                               | NT\$6,954,226 (US\$221,018)    | Investment consulting and warehousing management services                                                                                                                                                                                                                                                                                                                                                        |
| Universal Scientific Industrial (Shanghai) Co., Ltd. | Jan., 2003            | No. 1558, Zhang Dong Road, Zhangjiang Hi-Tech Park, Pudong New Area, Shanghai City                                                    | NT\$10,649,110 (RMB 2,175,924) | Electronic product design and manufacturing services, production and processing of new electronic components, high-performance motherboards, wireless network communication components, and mobile communication products and spare parts; sales of self-produced products and provision of related technical consulting services; wholesale and retail of electronic and communication products and spare parts |
| Universal Global Technology Co., Limited             | Mar., 2008            | RMS 2702-3 27/F, Bank Ofeast Asia Harbour Viewcentre, 56                                                                              | NT\$5,229,273 (US\$170,500)    | Holding company                                                                                                                                                                                                                                                                                                                                                                                                  |

| Company                                                | Date of Incorporation | Address                                                                                                                                        | Share Capital (in thousands)  | Business Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                        |                       | Gloucester Rd, Wan Chai, HK                                                                                                                    |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Universal Global Technology (Kunshan) Co., Ltd.        | Aug., 2011            | Building 4, No. 497, Huangpu Road, Qiandeng Town, Kunshan City, Jiangsu Province                                                               | NT\$1,202,223 (RMB 250,000)   | Electronic product design and manufacturing services, production and processing of new electronic components, high-performance motherboards, wireless network communication components, and mobile communication products and spare parts; sales of self-produced products and provision of related technical consulting services; wholesale and retail of electronic and communication products and spare parts                                                                                                         |
| Universal Global Technology (Shanghai) Co., Ltd.       | Sep., 2013            | No 501, Longgui Road, Jinqiao Export Processing Zone, Pudong New Area, Shanghai City                                                           | NT\$6,652,140 (RMB 1,330,000) | Research, development, and manufacturing of electronic products; processing and maintenance of new electronic components, high-performance motherboards, wireless network communication components, mobile communication products and modules, and spare parts; sales of electronic products, communication products, and spare parts; third-party logistics services (except transportation); import and export of goods and technology; and technical consultation and technical services for the above business items |
| Universal Global Electronics (Shanghai) Co., Ltd.      | May, 2014             | Room 229, 2F., No. 8, Jiafeng Road, Pilot Free Trade Zone, Shanghai City                                                                       | NT\$240,850 (RMB 50,000)      | Sales of electronic components, computer hardware and software (except for computer information system security products), communication equipment, and accessories (except terrestrial satellite receivers); third-party logistics services (except transportation); industrial investment; import and export of goods and technology; transit trade; business-to-business trade within the trade zone, and trade agency                                                                                                |
| Universal Global Industrial Co., Limited               | Oct., 2009            | Rms 2702-3 27/F, Bank of East Asia Harbour View Centre, 56 Gloucester Rd, Wan Chai, HK                                                         | NT\$330,960 (US\$11,000)      | Trade and investment holding company                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Universal Global Scientific Industrial Co., Ltd.       | Dec., 2009            | No. 141, Alley 351, Taiping Road Sec. 1, Caotun Township, Nantou County                                                                        | NT\$1,980,000                 | Manufacturing of wired and wireless communication machinery and equipment, electronic components, computers and peripheral equipment, and automotive and parts; products design and R&D service                                                                                                                                                                                                                                                                                                                          |
| USI America Inc.                                       | Oct., 2000            | 3600 Peterson Way, Santa Clara, CA 95054, USA                                                                                                  | NT\$314,015 (US\$9,500)       | Sample production and maintenance services for computer information equipment                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Universal Scientific Industrial De Mexico S.A. De C.V. | Sep., 1997            | Anillo Periferico Manuel Gomez Morin No 656R. Santa Isabel C.P. 44290 Guadalajara, Jalisco, Mexico                                             | NT\$776,221 (US\$23,963)      | Motherboard and computer system assembly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| USI Japan Co., Ltd.                                    | Mar., 2000            | 8F West Tower, Yokohama Business Park, 134 Godo-cho, Hodogaya-ku, Yokohama-shi, Kanagawa 240-0005                                              | NT\$27,231 (¥95,000)          | Manufacturing and trading of peripherals, integrated circuits, and electronic components                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| USI Electronics (Shenzhen) Co., Ltd.                   | Jul., 2000            | Huanxi Electronics Park, No. 9028, Beihuan Boulevard, Xili Street Hi-Tech Park North Area, Nanshan District, Shenzhen City, Guangdong Province | NT\$2,270,625 (US\$75,000)    | Design, manufacture, and sales of products of computer motherboards, other related computer peripherals, and communication industrial control                                                                                                                                                                                                                                                                                                                                                                            |
| Universal Global Electronics Co., Ltd.                 | Dec., 2017            | Rooms 2702-3, 27th Floor, Bank of East Asia Harbour View Centre, 56 Gloucester Road, Wan Chai, Hong                                            | NT\$273,555 (US\$9,000)       | Ordering and outsourcing, selling electronic products, providing technical consulting services                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Company                                   | Date of Incorporation | Address                                                                 | Share Capital (in thousands) | Business Activities                                                                                                                                                                                                                   |
|-------------------------------------------|-----------------------|-------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           |                       | Kong.                                                                   |                              |                                                                                                                                                                                                                                       |
| Universal Scientific Industrial Co., Ltd. | Feb.,1974             | No. 141, Alley 351, Taiping Road Sec. 1, Caotun Township, Nantou County | NT\$1,400,000                | Manufacturing, processing, and trading of computer information peripherals, thick-film hybrid integrated circuits, wireless local area network equipment, electronic parts and accessories, and personal computers and computer parts |

8.1.3 Shareholders in Common of the Company and Its Affiliates with Deemed Control and Subordination: None

8.1.4 Business Scope of the Company and its Affiliates:

1. The Company's affiliates are involved in electronics manufacturing, electronics services, investment, leasing, and construction.
2. The Group has long been focused on providing a wide portfolio of assembly and testing services for semiconductor clients, including front-end engineering test, wafer probing and final test for packaging material and performance testing. In addition, customers can obtain complete electronics manufacturing service solutions through the Group's subsidiary Universal Scientific Industrial Co., Ltd.
3. In general, the operations of the Company's affiliates are interrelated. Division of labor is achieved through the provision of technical and production support, marketing, and services, thereby maximizing the competitiveness and synergistic effect of the Group and solidifying the Company's leading position in the industry.

## 8.1.5 List of Directors, Supervisors, and Presidents of the Company's affiliates

| Company                                    | Title                                                        | Name or Representative           | Shareholding  |        |
|--------------------------------------------|--------------------------------------------------------------|----------------------------------|---------------|--------|
|                                            |                                                              |                                  | Shares        | %      |
| ASE Technology Holding Co., Ltd            | Director                                                     | A.S.E. Enterprises Limited       | 684,327,886   | 15.83% |
|                                            | Director (representative) and Chairman                       | Jason C.S. Chang                 | —             | —      |
|                                            | Director (representative), Vice Chairman and General Manager | Richard H. P. Chang              | —             | —      |
|                                            | Director (representative)                                    | Bough Lin                        | —             | —      |
|                                            | Director (representative)                                    | Chi-Wen Tsai                     | —             | —      |
|                                            | Director (representative)                                    | Tien Wu                          | —             | —      |
|                                            | Director (representative)                                    | Joseph Tung                      | —             | —      |
|                                            | Director (representative)                                    | Raymond Lo                       | —             | —      |
|                                            | Director (representative)                                    | TS Chen                          | —             | —      |
|                                            | Director (representative)                                    | Jeffrey Chen                     | —             | —      |
|                                            | Director                                                     | Rutherford Chang                 | 1,577,647     | 0.04%  |
|                                            | Independent Director                                         | Sheng-Fu You                     | —             | —      |
|                                            | Independent Director                                         | Ta-Lin Hsu                       | —             | —      |
|                                            | Independent Director                                         | Mei-Yueh Ho                      | —             | —      |
| Advanced Semiconductor Engineering, Inc.   | Director and Supervisor                                      | ASE Technology Holding Co., Ltd. | 5,528,783,764 | 100%   |
|                                            | Director (representative) and Chairman                       | Jason C.S. Chang                 | —             | —      |
|                                            | Director (representative)                                    | Rutherford Chang                 | —             | —      |
|                                            | Director (representative)                                    | Joseph Tung                      | —             | —      |
|                                            | Director (representative)                                    | Raymond Lo                       | —             | —      |
|                                            | Director (representative)                                    | TS Chen                          | —             | —      |
|                                            | Director (representative)                                    | Jeffrey Chen                     | —             | —      |
|                                            | Director (representative)                                    | Jerry Chang                      | —             | —      |
|                                            | Director (representative)                                    | Andrew Tang                      | —             | —      |
|                                            | Director (representative)                                    | Dtuang Wang                      | —             | —      |
|                                            | Supervisor (representative)                                  | Danielle Chang                   | —             | —      |
|                                            | Supervisor (representative)                                  | Chia-Pay Chu                     | —             | —      |
|                                            | Supervisor (representative)                                  | Chun-Che Lee                     | —             | —      |
| Siliconware Precision Industries Co., Ltd. | Director and Supervisor                                      | ASE Technology Holding Co., Ltd  | 3,391,748,878 | 100%   |
|                                            | Director (representative) and Chairman                       | Bough Lin                        | —             | —      |
|                                            | Director (representative) and Vice Chairman                  | Chi-Wen Tsai                     | —             | —      |
|                                            | Director (representative)                                    | Yen-Chun Chang                   | —             | —      |
|                                            | Director (representative)                                    | Randy Hsiao-Yu Lo                | —             | —      |
|                                            | Director (representative)                                    | Teresa Wang                      | —             | —      |
|                                            | Director (representative)                                    | Kun-Yi Chien                     | —             | —      |
|                                            | Director (representative)                                    | Michael Chang                    | —             | —      |
|                                            | Director (representative)                                    | River Gu                         | —             | —      |
|                                            | Director (representative)                                    | David Tseng                      | —             | —      |
|                                            | Supervisor (representative)                                  | Ching-Yu Hsu                     | —             | —      |
|                                            | Supervisor (representative)                                  | Chien-An Chen                    | —             | —      |
| USI Inc.                                   | Director and Supervisor                                      | USI Global Inc.                  | 1,757,334,372 | 100%   |
|                                            | Director (representative) and Chairman                       | Jeffrey Chen                     | —             | —      |
|                                            | Director (representative)                                    | Tien Wu                          | —             | —      |
|                                            | Director (representative)                                    | Chen-Yen Wei                     | —             | —      |
|                                            | Director (representative)                                    | Rutherford Chang                 | —             | —      |
|                                            | Director (representative)                                    | Jerry Chang                      | —             | —      |
|                                            | Director (representative)                                    | David Pan                        | —             | —      |
|                                            | Director (representative)                                    | Chun-Che Lee                     | —             | —      |
|                                            | Director (representative)                                    | Alan Li                          | —             | —      |
|                                            | Director (representative)                                    | Chen-Lung Wei                    | —             | —      |
|                                            | Director (representative)                                    | Meng-Kuo Shih                    | —             | —      |
|                                            | Director (representative)                                    | Dan-Yang Liu                     | —             | —      |
|                                            | Supervisor (representative)                                  | Andrew Tang                      | —             | —      |

| Company                                  | Title                                         | Name or Representative                   | Shareholding  |        |
|------------------------------------------|-----------------------------------------------|------------------------------------------|---------------|--------|
|                                          |                                               |                                          | Shares        | %      |
|                                          | Supervisor (representative)                   | Hsu-Chun Yu                              | —             | —      |
|                                          | Supervisor (representative)                   | Yuan-Yi Tseng                            | —             | —      |
|                                          | Supervisor (representative)                   | Wen-Hsiang Chien                         | —             | —      |
|                                          | Supervisor (representative)                   | Jye-Shing Lin                            | —             | —      |
| A.S.E Holding Limited                    | Director                                      | Jason C. S. Chang                        | —             | —      |
|                                          | Director                                      | Richard H. P. Chang                      | —             | —      |
|                                          | Director                                      | Joseph Tung                              | —             | —      |
| J&R Holding Limited                      | Director                                      | Jason C. S. Chang                        | —             | —      |
|                                          | Director                                      | Richard H. P. Chang                      | —             | —      |
|                                          | Director                                      | Joseph Tung                              | —             | —      |
| Innosource Limited                       | Director                                      | Jason C. S. Chang                        | —             | —      |
|                                          | Director                                      | Richard H. P. Chang                      | —             | —      |
|                                          | Director                                      | Joseph Tung                              | —             | —      |
| Omniquest Industrial Limited             | Director                                      | Richard H. P. Chang                      | —             | —      |
|                                          | Director                                      | Joseph Tung                              | —             | —      |
|                                          | Director                                      | Jeffrey Chen                             | —             | —      |
| ASE Marketing & Service Japan Co., Ltd.  | Director                                      | Tien Wu                                  | —             | —      |
|                                          | Director                                      | David Pan                                | —             | —      |
|                                          | Director                                      | Chih-Hsiao Chung                         | —             | —      |
|                                          | Supervisor                                    | Joseph Tung                              | —             | —      |
| ASE Test Inc.                            | Director and Supervisor                       | Advanced Semiconductor Engineering, Inc. | 1,131,452,502 | 100%   |
|                                          | Director (representative) and Chairman        | Jason C.S. Chang                         | —             | —      |
|                                          | Director (representative) and General Manager | Raymond Lo                               | —             | —      |
|                                          | Director (representative)                     | David Pan                                | —             | —      |
|                                          | Director (representative)                     | Rutherford Chang                         | —             | —      |
|                                          | Director (representative)                     | TS Chen                                  | —             | —      |
|                                          | Director (representative)                     | Jeffrey Chen                             | —             | —      |
|                                          | Director (representative)                     | Alan Cheng                               | —             | —      |
|                                          | Director (representative)                     | Jerry Chang                              | —             | —      |
|                                          | Director (representative)                     | Chun-Che Lee                             | —             | —      |
|                                          | Director (representative)                     | Anne Chang                               | —             | —      |
|                                          | Director (representative)                     | Alan Li                                  | —             | —      |
|                                          | Supervisor (representative)                   | Andrew Tang                              | —             | —      |
|                                          | Supervisor (representative)                   | Murphy Kuo                               | —             | —      |
|                                          | Supervisor (representative)                   | Yuan-Yi Tseng                            | —             | —      |
| Lu-Chu Development Corporation           | Director                                      | Advanced Semiconductor Engineering, Inc. | 131,961,457   | 67.11% |
|                                          | Director (representative) and Chairman        | David Pan                                | —             | —      |
|                                          | Director (representative)                     | Joseph Tung                              | —             | —      |
|                                          | Director (representative)                     | TS Chen                                  | —             | —      |
|                                          | Director (representative)                     | Murphy Kuo                               | —             | —      |
|                                          | Director (representative)                     | Alan Li                                  | —             | —      |
|                                          | Supervisor                                    | Hsu-Chun Yu                              | —             | —      |
|                                          | Supervisor                                    | Eddie Chang                              | —             | —      |
| TLJ Intertech Inc.                       | Director                                      | ASE Test Inc.                            | 2,119,080     | 60%    |
|                                          | Director (representative) and Chairman        | David Pan                                | —             | —      |
|                                          | Director                                      | Shih-Ling Lin                            | 617,720       | 17.49% |
|                                          | Director and General Manager                  | Joseph Tung                              | 366,000       | 10.36% |
|                                          | Director (representative)                     | Alan Li                                  | —             | —      |
|                                          | Director (representative)                     | Chu-Ling Liu                             | —             | —      |
|                                          | Supervisor                                    | Freddie Liu                              | 0             | —      |
| MingFung Information Service Corp., Ltd. | Director and Supervisor                       | ASE Test Inc.                            | 3,000,000     | 100%   |
|                                          | Director (representative) and Chairman        | David Pan                                | —             | —      |

| Company                                         | Title                                     | Name or Representative  | Shareholding |      |
|-------------------------------------------------|-------------------------------------------|-------------------------|--------------|------|
|                                                 |                                           |                         | Shares       | %    |
|                                                 | Director (representative)                 | Chu-Ling Liu            | —            | —    |
|                                                 | Director (representative)                 | Chan Chi Hong Alex      | —            | —    |
|                                                 | Supervisor (representative)               | Eddie Chang             | —            | —    |
| Alto Enterprises Limited                        | Director                                  | Jason Chang             | —            | —    |
|                                                 | Director                                  | Richard Chang           | —            | —    |
|                                                 | Director                                  | Joseph Tung             | —            | —    |
| Super Zone Holdings Limited                     | Director                                  | Jason C.S. Chang        | —            | —    |
|                                                 | Director                                  | Richard H.P. Chang      | —            | —    |
|                                                 | Director                                  | Jeffrey Chen            | —            | —    |
| ASE (KunShan) Inc.                              | Director and Chairman                     | Tien Wu                 | —            | —    |
|                                                 | Director                                  | TS Chen                 | —            | —    |
|                                                 | Director                                  | Chris Hsu               | —            | —    |
|                                                 | Supervisor                                | Jeffrey Chen            | —            | —    |
| ASE Investment (Kunshan) Limited                | Director and Chairman                     | Jason C.S. Chang        | —            | —    |
|                                                 | Director                                  | Rutherford Chang        | —            | —    |
|                                                 | Director                                  | Chris Hsu               | —            | —    |
|                                                 | Supervisor                                | Vincent Cheng           | —            | —    |
| Advanced Semiconductor Engineering (China) Ltd. | Director and Chairman and General Manager | Dtuang Wang             | —            | —    |
|                                                 | Director                                  | Walter Chen             | —            | —    |
|                                                 | Director                                  | Hsu-Chun Yu             | —            | —    |
|                                                 | Supervisor                                | Alan Li                 | —            | —    |
| ASE Investment (Labuan) Inc.                    | Director                                  | A.S.E Holding Limited   | —            | —    |
|                                                 | Director                                  | Mathew-Willie           | —            | —    |
|                                                 | Director                                  | ASE Test Limited        | —            | —    |
| ASE Test Limited                                | Director                                  | Jason C.S. Chang        | —            | —    |
|                                                 | Director                                  | Richard H.P. Chang      | —            | —    |
|                                                 | Director                                  | Lee Kwai Mun            | —            | —    |
|                                                 | Director                                  | Jeffrey Chen            | —            | —    |
| ASE (Korea ) Inc.                               | Director                                  | SongWoon Kim            | —            | —    |
|                                                 | Director                                  | Tien Wu                 | —            | —    |
|                                                 | Director                                  | Joseph Tung             | —            | —    |
|                                                 | Supervisor                                | Jeffrey Chen            | —            | —    |
| J&R Industrial Inc.                             | Director                                  | J&R Holding Limited     | 170,000,006  | 100% |
|                                                 | Director (representative) and Chairman    | Jason C.S. Chang        | —            | —    |
|                                                 | Director (representative)                 | Richard H. P. Chang     | —            | —    |
|                                                 | Director (representative)                 | Joseph Tung             | —            | —    |
|                                                 | Supervisor (representative)               | Mei-Jen Feng            | —            | —    |
| ASE Japan Co., Ltd.                             | Director                                  | Tien Wu                 | —            | —    |
|                                                 | Director                                  | David Pan               | —            | —    |
|                                                 | Director and Chairman                     | Chih-Hsiao Chung        | —            | —    |
|                                                 | Supervisor                                | Joseph Tung             | —            | —    |
| ASE (U.S.) Inc.                                 | Director                                  | Kenneth Shih-Jye Hsiang | —            | —    |
| Global Advanced Packaging Technology Limited    | Director                                  | Richard H. P. Chang     | —            | —    |
|                                                 | Director                                  | Tien-Yue Wu             | —            | —    |
| ASE (Weihai) Inc.                               | Director and Chairman                     | Tien Wu                 | —            | —    |
|                                                 | Director                                  | Tsao Yen-Chien          | —            | —    |
|                                                 | Director                                  | TS Chen                 | —            | —    |
|                                                 | Supervisor                                | Jeffrey Chen            | —            | —    |
| Suzhou ASEN Semiconductors Co., Ltd.            | Director and Chairman                     | Tien Wu                 | —            | —    |
|                                                 | Director                                  | Sun Youtian             | —            | —    |
|                                                 | Director                                  | Jeffrey Chen            | —            | —    |
|                                                 | Director                                  | Yong-Chun Zhu           | —            | —    |
|                                                 | Director                                  | Chris Hsu               | —            | —    |



| Company                                             | Title                 | Name or Representative  | Shareholding |   |
|-----------------------------------------------------|-----------------------|-------------------------|--------------|---|
|                                                     |                       |                         | Shares       | % |
|                                                     | Supervisor            | TS Chen                 | —            | — |
| Anstock Limited                                     | Director              | Jason Chang             | —            | — |
|                                                     | Director              | Richard Chang           | —            | — |
|                                                     | Director              | Joseph Tung             | —            | — |
| Anstock Limited II                                  | Director              | Jason C. S. Chang       | —            | — |
|                                                     | Director              | Alan Li                 | —            | — |
|                                                     | Director              | Murphy Kuo              | —            | — |
| ASE (Shanghai) Inc.                                 | Director and Chairman | Tien Wu                 | —            | — |
|                                                     | Director              | Chun-Che Lee            | —            | — |
|                                                     | Director              | Chung Lin               | —            | — |
|                                                     | Supervisor            | Jeffrey Chen            | —            | — |
| ASE Corporation                                     | Director              | Jason Chang             | —            | — |
|                                                     | Director              | Joseph Hung Szu Tung    | —            | — |
| ASE Mauritius Inc.                                  | Director              | Jason Chang             | —            | — |
|                                                     | Director              | M. Aslam Koomar         | —            | — |
|                                                     | Director              | M. Shariff Golam Hossen | —            | — |
|                                                     | Director              | Joseph Tung             | —            | — |
| ASE Labuan Inc.                                     | Director              | Jason Chang             | —            | — |
|                                                     | Director              | Joseph Hung-Szu Tung    | —            | — |
|                                                     | Director              | Chau Siew Ha            | —            | — |
| Shanghai Ding Hui Real Estate Development Co., Ltd. | Director and Chairman | Jason C.S. Chang        | —            | — |
|                                                     | Director              | Madeline D Chang        | —            | — |
|                                                     | Director              | Jeffrey Chen            | —            | — |
|                                                     | Director              | Vincent Cheng           | —            | — |
|                                                     | Director              | Andrew Robert Tang      | —            | — |
|                                                     | Supervisor            | Kuo-Chiang Peng         | —            | — |
| Shanghai Ding Qi Property Management Co., Ltd.      | Director and Chairman | Jason C.S. Chang        | —            | — |
|                                                     | Director              | Junting Chen            | —            | — |
|                                                     | Director              | Jeffrey Chen            | —            | — |
|                                                     | Supervisor            | Kuo-Chiang Peng         | —            | — |
| Advanced Semiconductor Engineering (HK) Limited     | Director and Chairman | Richard H. P. Chang     | —            | — |
|                                                     | Director              | Jeffrey Chen            | —            | — |
|                                                     | Director              | Vincent Cheng           | —            | — |
| Shanghai Ding Wei Real Estate Development Co., Ltd. | Director and Chairman | Jason C.S. Chang        | —            | — |
|                                                     | Director              | Jeffrey Chen            | —            | — |
|                                                     | Director              | Junting Chen            | —            | — |
|                                                     | Director              | Madeline D Chang        | —            | — |
|                                                     | Director              | Andrew Robert Tang      | —            | — |
|                                                     | Supervisor            | Kuo-Chiang Peng         | —            | — |
| Shanghai Ding Yu Real Estate Development Co., Ltd.  | Director and Chairman | Jason C.S. Chang        | —            | — |
|                                                     | Director              | Jeffrey Chen            | —            | — |
|                                                     | Director              | Junting Chen            | —            | — |
|                                                     | Director              | Madeline D Chang        | —            | — |
|                                                     | Director              | Andrew Robert Tang      | —            | — |
|                                                     | Supervisor            | Kuo-Chiang Peng         | —            | — |
| Shanghai Ding Fan Department Store Co., Ltd.        | Director and Chairman | Jason C.S. Chang        | —            | — |
|                                                     | Director              | Jeffrey Chen            | —            | — |
|                                                     | Director              | Junting Chen            | —            | — |
|                                                     | Supervisor            | Kuo-Chiang Peng         | —            | — |
| KunShan Ding Hong Real Estate Development Co., Ltd. | Director and Chairman | Jason C.S. Chang        | —            | — |
|                                                     | Director              | Vincent Cheng           | —            | — |
|                                                     | Director              | Jeffrey Chen            | —            | — |
|                                                     | Supervisor            | Kuo-Chiang Peng         | —            | — |

| Company                                        | Title                                         | Name or Representative                     | Shareholding |      |
|------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------|------|
|                                                |                                               |                                            | Shares       | %    |
| Shanghai Ding Xu Property Management Co., Ltd. | Director and Chairman                         | Jason C.S. Chang                           | —            | —    |
|                                                | Director                                      | Tung-Chou Ma                               | —            | —    |
|                                                | Director                                      | Jeffrey Chen                               | —            | —    |
|                                                | Supervisor                                    | Kuo-Chiang Peng                            | —            | —    |
| ASE Electronics, Inc.                          | Director and Supervisor                       | ASE Labuan Inc.                            | 398,981,900  | 100% |
|                                                | Director (representative) and Chairman        | Tien Wu                                    | —            | —    |
|                                                | Director (representative) and General Manager | Chun-Che Lee                               | —            | —    |
|                                                | Director (representative)                     | Jeffrey Chen                               | —            | —    |
|                                                | Supervisor (representative)                   | Davie Pan                                  | —            | —    |
| ASE Test Holdings, Ltd.                        | Director                                      | Jason C. S. Chang                          | —            | —    |
|                                                | Director                                      | David Pan                                  | —            | —    |
|                                                | Director                                      | Joseph Tung                                | —            | —    |
|                                                | Director                                      | Jeffrey Chen                               | —            | —    |
| ASE Holdings (Singapore) Pte Ltd               | Director                                      | Hsiang De Way                              | —            | —    |
|                                                | Director                                      | Choong Lai Heng                            | —            | —    |
|                                                | Director                                      | Jeswant Singh s/o Darshan Singh            | —            | —    |
| ASE Singapore Pte. Ltd.                        | Director and Chairman                         | Wu, Tien-Yue                               | —            | —    |
|                                                | Director                                      | Lee Kwai Mun                               | —            | —    |
|                                                | Director                                      | Kenneth Hsiang Shih-Jye                    | —            | —    |
| ISE Labs, Inc.                                 | Director and Chairman                         | Tien Wu                                    | —            | —    |
|                                                | Director                                      | Andrew Tang                                | —            | —    |
|                                                | Director                                      | David Pan                                  | —            | —    |
|                                                | Director                                      | Ken Hsiang                                 | —            | —    |
|                                                | Director                                      | Jeffrey Chen                               | —            | —    |
| ASE Electronics (M) Sdn. Bhd.                  | Director and Chairman                         | Tien Wu                                    | —            | —    |
|                                                | Director                                      | Lee Kwai Mun                               | —            | —    |
|                                                | Director                                      | Hsiang, De-Way                             | —            | —    |
|                                                | Director                                      | Joseph Tung                                | —            | —    |
|                                                | Director                                      | Choong Lai Heng                            | —            | —    |
| ASE Assembly & Test (Shanghai) Limited         | Director and Chairman                         | Tien-Yue Wu                                | —            | —    |
|                                                | Director                                      | Chris Hsu                                  | —            | —    |
|                                                | Director and General Manager                  | Mitch Cheng                                | —            | —    |
|                                                | Supervisor                                    | Jeffrey Chen                               | —            | —    |
| ISE labs, China. Ltd.                          | Director and Chairman                         | Tien Wu                                    | —            | —    |
|                                                | Director                                      | Kenneth Shih-Jye Hsiang                    | —            | —    |
|                                                | Director and General Manager                  | Bruce Chen                                 | —            | —    |
|                                                | Supervisor                                    | Chris Hsu                                  | —            | —    |
| Wuxi Tongzhi Microelectronics Co., Ltd.        | Director and Chairman                         | Tien Wu                                    | —            | —    |
|                                                | Director                                      | Chih-Hsiao Chung                           | —            | —    |
|                                                | Director                                      | Jeffrey Chen                               | —            | —    |
|                                                | Supervisor                                    | Joseph Tung                                | —            | —    |
| SPIL (B.V.I.) Holding Limited                  | Director                                      | Bough Lin                                  | 179,400,000  | 100% |
| Siliconware Investment Co., Ltd                | Director and Supervisor                       | Siliconware Precision Industries Co., Ltd. | 66,769,400   | 100% |
|                                                | Director (representative)                     | Bough Lin                                  | —            | —    |
|                                                | Director (representative)                     | Chi-Wen Tsai                               | —            | —    |
|                                                | Director (representative)                     | Yen-Chun Chang                             | —            | —    |
|                                                | Supervisor (representative)                   | Yu-Hu Liu                                  | —            | —    |
| Siliconware USA, Inc.                          | Director                                      | Bough Lin                                  | 1,250,000    | 100% |
|                                                | Director                                      | Chi-Wen Tsai                               | —            | —    |
|                                                | Director and General Manager                  | Randy Hsiao-Yu Lo                          | —            | —    |
| SPIL (Cayman) Holding Limited                  | Director                                      | Chi-Wen Tsai                               | 181,200,000  | 100% |

| Company                                              | Title                                  | Name or Representative           | Shareholding |      |
|------------------------------------------------------|----------------------------------------|----------------------------------|--------------|------|
|                                                      |                                        |                                  | Shares       | %    |
| Siliconware Technology (Suzhou) Ltd.                 | Director                               | Chi-Wen Tsai                     | —            | —    |
|                                                      | Director and General Manager           | Ming-Shan Chang                  | —            | —    |
|                                                      | Director                               | Yong-Chun Zhu                    | —            | —    |
|                                                      | Supervisor                             | Su-Feng Chen                     | —            | —    |
| Siliconware Electronics (Fujian) Ltd.                | Director                               | Chi-Wen Tsai                     | —            | —    |
|                                                      | Director                               | Kun-Yi Chien                     | —            | —    |
|                                                      | Director and General Manager           | Chuan-Feng Lee                   | —            | —    |
|                                                      | Supervisor                             | Yu-Chih Yu                       | —            | —    |
| USI Global Inc.                                      | Director and Supervisor                | ASE Technology Holding Co., Ltd. | 30,000,000   | 100% |
|                                                      | Director (representative) and Chairman | Jeffrey Chen                     | —            | —    |
|                                                      | Director (representative)              | Chen-Yen Wei                     | —            | —    |
|                                                      | Director (representative)              | Meng-Kuo Shih                    | —            | —    |
|                                                      | Supervisor (representative)            | Dan-Yang Liu                     | —            | —    |
| Huntington Holdings International Co. Ltd.           | Director                               | Jeffrey Chen                     | —            | —    |
|                                                      | Director                               | Chen-Yen Wei                     | —            | —    |
|                                                      | Director                               | Meng-Kuo Shih                    | —            | —    |
|                                                      | Director                               | Chen-Lung Wei                    | —            | —    |
| Unitech Holdings International Co. Ltd               | Director                               | Chen-Yen Wei                     | —            | —    |
|                                                      | Director                               | Meng-Kuo Shih                    | —            | —    |
| Real Tech Holdings Limited                           | Director                               | Richard H.P. Chang               | —            | —    |
|                                                      | Director                               | Meng-Kuo Shih                    | —            | —    |
|                                                      | Director                               | Chen-Yen Wei                     | —            | —    |
| Universal ABIT Holding (Cayman) Co., Ltd             | Director                               | Chen-Lung Wei                    | —            | —    |
|                                                      | Director                               | Hong He                          | —            | —    |
|                                                      | Director                               | Da-Yi Lin                        | —            | —    |
|                                                      | Director                               | Meng-Kuo Shih                    | —            | —    |
|                                                      | Director                               | Kuo-Hsiang Wu                    | —            | —    |
| Rising Capital Investment Limited                    | Director                               | Meng-Kuo Shih                    | —            | —    |
| Rise Accord Limited                                  | Director                               | Meng-Kuo Shih                    | —            | —    |
| Universal Scientific Industrial (Kunshan) Co., Ltd.  | Director and Chairman                  | Jeffrey Chen                     | —            | —    |
|                                                      | Director                               | Chen-Yen Wei                     | —            | —    |
|                                                      | Director and General Manager           | Chen-Lung Wei                    | —            | —    |
|                                                      | Supervisor                             | Meng-Kuo Shih                    | —            | —    |
| USI Enterprise Limited                               | Director                               | Jeffrey Chen                     | —            | —    |
|                                                      | Director                               | Meng-Kuo Shih                    | —            | —    |
|                                                      | Director                               | Chen-Yen Wei                     | —            | —    |
| Universal Scientific Industrial (Shanghai) Co., Ltd. | Director and Chairman                  | Jeffrey Chen                     | —            | —    |
|                                                      | Director                               | TS Chen                          | —            | —    |
|                                                      | Director                               | Rutherford Chang                 | —            | —    |
|                                                      | Director and General Manager           | Chen-Yen Wei                     | —            | —    |
|                                                      | Director                               | Dtuang Wang                      | —            | —    |
|                                                      | Director                               | Neng Chao Chang                  | —            | —    |
|                                                      | Independent Director                   | Charles Chang                    | —            | —    |
|                                                      | Independent Director                   | Yun-Wei Tang                     | —            | —    |
|                                                      | Independent Director                   | Yi-Yun Chu                       | —            | —    |
|                                                      | Supervisor                             | Andrew Robert Tang               | —            | —    |
|                                                      | Supervisor                             | Meng-Kuo Shih                    | —            | —    |
|                                                      | Supervisor                             | Hui-Min Liu                      | —            | —    |
| Universal Global Technology Co., Limited             | Director                               | Jeffrey Chen                     | —            | —    |
|                                                      | Director                               | Chen-Yen Wei                     | —            | —    |
|                                                      | Director                               | Dan-Yang Liu                     | —            | —    |
| Universal Global Technology (Kunshan) Co., Ltd.      | Director and Chairman                  | Jeffrey Chen                     | —            | —    |
|                                                      | Director and General Manager           | Da-Yi Lin                        | —            | —    |

| Company                                               | Title                                  | Name or Representative                           | Shareholding |        |
|-------------------------------------------------------|----------------------------------------|--------------------------------------------------|--------------|--------|
|                                                       |                                        |                                                  | Shares       | %      |
|                                                       | Director                               | Chen-Yen Wei                                     | —            | —      |
|                                                       | Supervisor                             | Meng-Kuo Shih                                    | —            | —      |
| Universal Global Technology (Shanghai) Co., Ltd.      | Director and Chairman                  | Jeffrey Chen                                     | —            | —      |
|                                                       | Director                               | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director                               | Chen-Lung Wei                                    | —            | —      |
|                                                       | Supervisor                             | Meng-Kuo Shih                                    | —            | —      |
| Universal Global Electronics (Shanghai) Co., Ltd.     | Director and Chairman                  | Jeffrey Chen                                     | —            | —      |
|                                                       | Director                               | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director                               | Meng-Kuo Shih                                    | —            | —      |
|                                                       | Supervisor                             | Dan-Yang Liu                                     | —            | —      |
| Universal Global Industrial Co., Limited              | Director                               | Jeffrey Chen                                     | —            | —      |
|                                                       | Director                               | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director                               | Meng-Kuo Shih                                    | —            | —      |
| Universal Global Scientific Industrial Co., Ltd.      | Director and Supervisor                | Universal Global Technology Co., Limited         | 198,000,000  | 100%   |
|                                                       | Director (representative) and Chairman | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director (representative)              | Jeffrey Chen                                     | —            | —      |
|                                                       | Director (representative)              | Meng-Kuo Shih                                    | —            | —      |
|                                                       | Supervisor (representative)            | Dan-Yang Liu                                     | —            | —      |
| USI America Inc.                                      | Director                               | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director                               | Li-Hua Chen                                      | —            | —      |
|                                                       | Director                               | Meng-Kuo Shih                                    | —            | —      |
| Universal Scientific Industrial De Mexico S.A De C.V. | Director                               | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director                               | Cheuh Hou                                        | —            | —      |
|                                                       | Director                               | Da-Yi Lin                                        | —            | —      |
|                                                       | Director                               | Meng-Kuo Shih                                    | —            | —      |
|                                                       | Director and General Manager           | Omar Anaya Galván                                | —            | —      |
| USI Japan Co., Ltd.                                   | Director                               | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director                               | Chen-Lung Wei                                    | —            | —      |
|                                                       | Director                               | Cheuh Hou                                        | —            | —      |
|                                                       | Director                               | Chih-Hsiao Chung                                 | —            | —      |
|                                                       | Supervisor                             | Meng-Kuo Shih                                    | —            | —      |
| USI Electronics (Shenzhen) Co., Ltd.                  | Director and Chairman                  | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director                               | Cheuh Hou                                        | —            | —      |
|                                                       | Director                               | Chen-Lung Wei                                    | —            | —      |
|                                                       | Director                               | Jeffrey Chen                                     | —            | —      |
|                                                       | Director                               | Da-Yi Lin                                        | —            | —      |
|                                                       | Supervisor                             | Meng-Kuo Shih                                    | —            | —      |
| Universal Global Electronics Co., Ltd.                | Director                               | Richard H.P. Chang                               | —            | —      |
|                                                       | Director                               | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director                               | Meng-Kuo Shih                                    | —            | —      |
|                                                       | Director                               | Dan-Yang Liu                                     | —            | —      |
| Universal Scientific Industrial Co., Ltd.             | Director                               | Universal Global Scientific Industrial Co., Ltd. | 139,517,546  | 99.66% |
|                                                       | Director (representative) and Chairman | Chen-Yen Wei                                     | —            | —      |
|                                                       | Director (representative)              | Jeffrey Chen                                     | —            | —      |
|                                                       | Director (representative)              | Meng-Kuo Shih                                    | —            | —      |
|                                                       | Supervisor                             | Dan-Yang Liu                                     | —            | —      |

## 8.1.6 Operational Highlights of Affiliated Companies

Units: NTD in thousands/Earnings per Share in NTD

| Company                                         | Paid-in Capital | Total Assets | Total Liabilities | Net Worth   | Operating Revenue | Operating Income | Net Income (Loss) After Tax | Earnings (Loss) Per Share After Tax |
|-------------------------------------------------|-----------------|--------------|-------------------|-------------|-------------------|------------------|-----------------------------|-------------------------------------|
| ASE Technology Holding Co., Ltd.                | 43,217,144      | 297,075,383  | 94,052,029        | 203,023,354 | 19,026,512        | 18,821,044       | 25,262,356                  | 5.84                                |
| Advanced Semiconductor Engineering, Inc.        | 55,287,838      | 265,948,506  | 158,805,421       | 107,143,085 | 101,633,025       | 10,345,588       | 15,112,814                  | 1.77                                |
| Siliconware Precision Industries Co., Ltd.      | 33,917,489      | 107,505,380  | 32,689,292        | 74,816,088  | 54,211,694        | 7,430,826        | 7,414,376                   | 2.16                                |
| USI Inc.                                        | 17,573,344      | 47,951,998   | 16,985,251        | 30,966,747  | 0                 | (133,589)        | 3,933,906                   | 2.24                                |
| A.S.E. Holding Limited                          | 7,915,000       | 17,596,224   | 1,129,707         | 16,466,517  | 0                 | (5,250)          | 635,328                     | 2,604.16                            |
| J&R Holding Limited                             | 13,907,259      | 76,444,128   | 18,408,887        | 58,035,241  | 0                 | (75,848)         | 2,647,339                   | 6,084.05                            |
| Innosource Limited                              | 2,770,696       | 4,537,702    | 3,200             | 4,534,502   | 0                 | 0                | (28,038)                    | (0.33)                              |
| Omniquest Industrial Limited                    | 11,457,298      | 16,793,537   | 31,259            | 16,762,278  | 0                 | 0                | (108,751)                   | (0.31)                              |
| ASE Marketing & Service Japan Co., Ltd.         | 18,298          | 46,238       | 10,306            | 35,932      | 89,410            | 5,849            | 2,520                       | 2,099.71                            |
| ASE Test Inc.                                   | 11,314,525      | 37,111,207   | 7,640,505         | 29,470,702  | 11,879,485        | 3,750,032        | 2,605,255                   | 2.36                                |
| Lu-Chu Development Corporation                  | 1,966,344       | 2,105,841    | 330               | 2,105,511   | 0                 | 96,995           | 100,195                     | (0.01)                              |
| TLJ Intertech Inc.                              | 35,318          | 33,781       | 2,579             | 31,202      | 18,185            | 7,088            | 6,810                       | 1.93                                |
| MingFung Information Service Corp., Ltd.        | 30,000          | 29,878       | 66                | 29,812      | 966               | (244)            | (188)                       | (0.06)                              |
| Alto Enterprises Limited                        | 5,709,330       | 4,541,850    | 0                 | 4,541,850   | 0                 | 0                | 107,827                     | 0.57                                |
| Super Zone Holdings Limited                     | 3,082,400       | 3,077,749    | 0                 | 3,077,749   | 0                 | 0                | 104,946                     | 1.05                                |
| ASE (KunShan) Inc.                              | 8,945,404       | 7,403,857    | 443,780           | 6,960,077   | 2,722,643         | 44,060           | 165,347                     | N/A                                 |
| ASE Investment (Kunshan) Limited                | 4,312,518       | 3,431,516    | 2,046             | 3,429,470   | 0                 | (36)             | 81,389                      | N/A                                 |
| Advanced Semiconductor Engineering (China) Ltd. | 3,149,000       | 3,094,063    | 16,431            | 3,077,632   | 0                 | (71,055)         | 104,946                     | N/A                                 |
| ASE Investment (Labuan) Inc.                    | 7,277,867       | 16,937,595   | 31,259            | 16,906,336  | 0                 | (93)             | 579,086                     | 2.40                                |
| ASE Test Limited                                | 659,075         | 34,946,100   | 1,780             | 34,944,320  | 0                 | (3,970)          | 2,128,835                   | 19.45                               |
| ASE (Korea) Inc.                                | 3,031,771       | 18,725,577   | 1,999,729         | 16,725,848  | 11,298,458        | (172,118)        | 572,368                     | 27.60                               |
| J&R Industrial Inc.                             | 1,700,000       | 1,008,077    | 197               | 1,007,880   | 0                 | (1,532)          | 3,765                       | 0.02                                |
| ASE Japan Co., Ltd.                             | 105,802         | 3,102,859    | 734,510           | 2,368,349   | 971,365           | (146,164)        | (95,217)                    | (13,224.55)                         |
| ASE (U.S.) Inc.                                 | 649             | 553,080      | 88,706            | 464,374     | 1,522,059         | 75,161           | 51,178                      | 51,177.93                           |
| Global Advanced Packaging Technology Limited    | 6,119,380       | 15,400,899   | 557,625           | 14,843,274  | 0                 | (499)            | 705,140                     | 3.71                                |
| ASE (Weihai) Inc.                               | 5,115,481       | 4,683,685    | 1,428,321         | 3,255,364   | 4,818,079         | 604,346          | 558,064                     | N/A                                 |
| Suzhou ASEN Semiconductors Co., Ltd.            | 1,568,467       | 6,744,666    | 1,092,747         | 5,651,919   | 6,043,404         | 606,558          | 541,706                     | N/A                                 |
| Anstock Limited                                 | 303             | 323,987      | 290,283           | 33,704      | 0                 | 0                | 9,849                       | 984.86                              |
| Anstock II Limited                              | 300             | 5,384        | 0                 | 5,384       | 0                 | (2)              | (3)                         | (0.26)                              |
| ASE (Shanghai) Inc.                             | 4,349,312       | 14,332,577   | 2,058,490         | 12,274,087  | 4,486,072         | 60,173           | (62,420)                    | N/A                                 |

| Company                                             | Paid-in Capital | Total Assets | Total Liabilities | Net Worth  | Operating Revenue | Operating Income | Net Income (Loss) After Tax | Earnings (Loss) Per Share After Tax |
|-----------------------------------------------------|-----------------|--------------|-------------------|------------|-------------------|------------------|-----------------------------|-------------------------------------|
| ASE Corporation                                     | 11,425,922      | 16,769,592   | 0                 | 16,769,592 | 0                 | (499)            | (108,039)                   | (0.31)                              |
| ASE Mauritius Inc.                                  | 7,046,629       | 13,213,514   | 129               | 13,213,385 | 0                 | (607)            | (11,833)                    | (0.05)                              |
| ASE Labuan Inc.                                     | 4,099,954       | 3,555,502    | 0                 | 3,555,502  | 0                 | (85)             | (95,712)                    | (0.76)                              |
| Shanghai Ding Hui Real Estate Development Co., Ltd. | 16,345,070      | 21,736,354   | 44,438            | 21,691,916 | 4,501             | (164,951)        | (530,605)                   | N/A                                 |
| Shanghai Ding Qi Property Management Co., Ltd.      | 5,078           | 127,257      | 161,853           | (34,596)   | 238,262           | 2,560            | 4,821                       | N/A                                 |
| Advanced Semiconductor Engineering (HK) Limited     | 32,130          | 745,718      | 435,212           | 310,506    | 1,711,800         | 5,607            | 4,250                       | 4.25                                |
| Shanghai Ding Wei Real Estate Development Co., Ltd. | 8,061,489       | 13,849,234   | 6,731,412         | 7,117,822  | 680,083           | (221,442)        | (516,772)                   | N/A                                 |
| Shanghai Ding Yu Real Estate Development Co., Ltd.  | 4,936,538       | 5,115,214    | 243,619           | 4,871,595  | 0                 | (21,029)         | (23,773)                    | N/A                                 |
| Shanghai Ding Fan Department Store Co., Ltd.        | 7,199           | 7,261        | 2,520             | 4,741      | 920               | (1,550)          | (2,044)                     | N/A                                 |
| KunShan Ding Hong Real Estate Development Co., Ltd. | 3,139,662       | 3,413,628    | 317,284           | 3,096,344  | 5,998             | (9,748)          | (5,931)                     | N/A                                 |
| Shanghai Ding Xu Property Management Co., Ltd.      | 22,860          | 29,597       | 5,172             | 24,425     | 54,346            | 2,026            | 1,902                       | N/A                                 |
| ASE Electronics Inc.                                | 3,989,819       | 4,361,831    | 823,614           | 3,538,217  | 3,815,064         | (76,798)         | (95,631)                    | (0.24)                              |
| ASE Test Holdings, Ltd.                             | 0(*)            | 3,195,194    | 0                 | 3,195,194  | 0                 | 0                | 53,440                      | 10,687,967                          |
| ASE Holdings (Singapore) Pte Ltd                    | 1,633,708       | 6,562,002    | 988,630           | 5,573,372  | 5,677,365         | 598,182          | 633,546                     | 8.87                                |
| ASE Singapore Pte. Ltd.                             | 984,851         | 6,103,080    | 1,226,133         | 4,876,947  | 3,949,586         | 1,069,309        | 970,088                     | 32.23                               |
| ISE Labs, Inc.                                      | 852             | 2,733,559    | 172,519           | 2,561,040  | 914,557           | 4,585            | 53,440                      | 2.04                                |
| ASE Electronics (M) Sdn. Bhd.                       | 2,019,907       | 6,562,002    | 988,630           | 5,573,372  | 5,677,365         | 598,182          | 633,546                     | 3.97                                |
| ASE Assembly & Test (Shanghai) Limited              | 6,501,336       | 20,842,621   | 5,479,317         | 15,363,304 | 6,469,875         | 1,197,152        | 717,964                     | N/A                                 |
| ISE labs, China. Ltd.                               | 222,231         | 225,858      | 5,909             | 219,949    | 0                 | (4,017)          | (3,803)                     | N/A                                 |
| Wuxi Tongzhi Microelectronics Co., Ltd.             | 356,682         | 525,141      | 60,032            | 465,109    | 329,595           | (8,138)          | 19,049                      | N/A                                 |
| SPIL (B.V.I.) Holding Limited(**)                   | 5,776,396       | 13,670,495   | 0                 | 13,670,495 | 0                 | (42)             | (27,117)                    | (0.15)                              |
| Siliconware Investment Co., Ltd. (**)               | 667,694         | 2,757,484    | 65                | 2,757,419  | 77,458            | 77,290           | 77,328                      | 1.16                                |
| Siliconware USA, Inc. (**)                          | 37,844          | 301,080      | 62,399            | 238,681    | 316,383           | 33,975           | 34,395                      | 27.52                               |
| SPIL (Cayman) Holding Limited(**)                   | 5,765,816       | 13,424,211   | 0                 | 13,424,211 | 0                 | (41)             | (61,867)                    | (0.34)                              |
| Siliconware Technology (Suzhou) Ltd.                | 5,608,532       | 18,859,637   | 7,920,151         | 10,939,487 | 7,048,075         | (203,345)        | (518,768)                   | N/A                                 |
| Siliconware Electronics (Fujian) Ltd. (**)          | 2,741,950       | 2,742,034    | 99,978            | 2,642,056  | 0                 | (99,229)         | (33,589)                    | N/A                                 |
| USI Global Inc.                                     | 300,000         | 33,114,092   | 485               | 33,113,607 | 0                 | (737)            | 435,975                     | 14.53                               |
| Huntington Holdings International Co. Ltd.          | 8,370,606       | 48,016,424   | 48,508            | 47,967,916 | 0                 | (181,159)        | 4,099,079                   | 16.02                               |
| Unitech Holdings International Co. Ltd.             | 93,495          | 262,292      | 392               | 261,900    | 0                 | (4,841)          | (64,704)                    | (21.57)                             |
| Real Tech Holdings Limited                          | 4,832,906       | 46,718,576   | 1,586             | 46,716,990 | 0                 | (33,312)         | 4,319,100                   | 28.96                               |

| Company                                                | Paid-in Capital | Total Assets | Total Liabilities | Net Worth  | Operating Revenue | Operating Income | Net Income (Loss) After Tax | Earnings (Loss) Per Share After Tax |
|--------------------------------------------------------|-----------------|--------------|-------------------|------------|-------------------|------------------|-----------------------------|-------------------------------------|
| Universal ABIT Holding (Cayman) Co., Ltd               | 906,249         | 510          | 105,415           | (104,905)  | 0                 | 0                | 0                           | 0                                   |
| Rising Capital Investment Limited                      | 176,940         | 35,290       | 0                 | 35,290     | 0                 | (54)             | 132                         | 0.02                                |
| Rise Accord Limited                                    | 57,730          | 1,873        | 0                 | 1,873      | 0                 | (33)             | (23)                        | (1.15)                              |
| Universal Scientific Industrial (Kunshan) Co., Ltd.    | 383,201         | 369,797      | 41                | 369,756    | 0                 | (1,192)          | 59,982                      | N/A                                 |
| USI Enterprise Limited                                 | 6,954,226       | 46,667,018   | 76,572            | 46,590,446 | 18,832            | (18,802)         | 4,298,910                   | 19.45                               |
| Universal Scientific Industrial (Shanghai) Co., Ltd.   | 10,649,110      | 51,540,033   | 9,366,465         | 42,173,568 | 42,663,768        | 720,469          | 5,312,702                   | 2.44                                |
| Universal Global Technology Co., Limited               | 5,229,273       | 19,495,361   | 4,931,844         | 14,563,517 | 7,044,047         | (155,609)        | 1,227,318                   | 0.92                                |
| Universal Global Technology (Kunshan) Co., Ltd.        | 1,202,223       | 11,586,037   | 7,186,687         | 4,399,350  | 18,715,987        | 1,109,895        | 980,967                     | N/A                                 |
| Universal Global Technology (Shanghai) Co., Ltd.       | 6,652,140       | 21,764,017   | 16,762,393        | 5,001,624  | 38,254,754        | 1,412,887        | 1,159,951                   | N/A                                 |
| Universal Global Electronics (Shanghai) Co., Ltd.      | 240,850         | 255,460      | 687               | 254,773    | 0                 | (226)            | 6,877                       | N/A                                 |
| Universal Global Industrial Co., Limited               | 330,960         | 7,944,728    | 7,577,593         | 367,135    | 27,902,255        | 18,659           | 24,008                      | 0.28                                |
| Universal Global Scientific Industrial Co., Ltd.       | 1,980,000       | 18,312,749   | 12,414,489        | 5,898,260  | 29,619,456        | 682,776          | 950,410                     | 4.80                                |
| USI America Inc.                                       | 314,015         | 219,192      | 24,279            | 194,913    | 135,646           | 7,522            | 5,123                       | 20.49                               |
| Universal Scientific Industrial De Mexico S.A. De C.V. | 776,221         | 5,046,360    | 3,640,185         | 1,406,175  | 5,096,497         | (92,087)         | (78,318)                    | (0.28)                              |
| USI Japan Co., Ltd.                                    | 27,231          | 34,461       | 5,008             | 29,453     | 24,698            | 2,229            | 1,615                       | 252.34                              |
| USI Electronics (Shenzhen) Co., Ltd.                   | 2,270,625       | 20,070,887   | 7,003,340         | 13,067,547 | 23,917,744        | 2,044,381        | 2,080,463                   | N/A                                 |
| Universal Global Electronics Co., Ltd.                 | 273,555         | 266,611      | 0                 | 266,611    | 0                 | (10,351)         | (9,843)                     | (1.09)                              |
| Universal Scientific Industrial Co., Ltd.              | 1,400,000       | 7,138,355    | 4,603,912         | 2,534,443  | 17,333,165        | 329,938          | 342,038                     | 2.44                                |

\* The startup capital is US\$5

\*\* On April 30, 2018, the Company acquired SPIL 100% equity through the joint share exchange, so since April 30, 2018, SPIL and its subsidiaries have been included in the reporting entity of the consolidated financial statements.

8.1.7 Consolidated Financial Statements of Affiliated Companies: Refer to p.1 of the Annual Report (II) Financial Statement.

8.1.8 The Company has disclosed the derivative products trading information, making endorsement and guarantees, and fund lending information of its affiliated companies on p.90-97 and p.104-106 of the “II. Financial Statement” section in this annual report. Companies not listed did not engage in relevant activities.

8.2 Private Placement Securities: None.

### 8.3 Subsidiaries' Shareholding or Disposition of the Company's Shares:

February 28, 2019 Units: NT\$ in thousands (unless otherwise specified)/ shares/ %

| Name of Subsidiary | Share Capital | Sources of funds                                                                                                   | Shareholding ratio | Date of acquisition or disposal                                                                                                  | Shares acquired and amount | Shares disposed and amount | Investment earnings (losses) | Shareholding as of the Date of this Annual Report                                                                     | Pledged shares | Endorsement for subsidiary | Loan to subsidiary |
|--------------------|---------------|--------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|--------------------|
| ASE Test Inc.      | 11,314,525    | Three-in-one stock exchange and surplus distribution of ASE merger with ASE Materials Inc., and ASE (Chungli) Inc. | 100%               | In August, 2004, the company obtained the 2010-2012 distributed stock dividend and disposed part of the shares on February 2010. | —                          | —                          | —                            | As of December 31, 2018: 5,489,388 shares<br>Book value: \$320,031<br>Amount transferred to treasury: \$196,677       | —              | —                          | —                  |
|                    |               |                                                                                                                    |                    | Current Year up to the Date of this Annual Report                                                                                | —                          | —                          | —                            | 5,489,388 shares<br>Book value: \$345,283<br>Amount transferred to treasury: \$196,677                                | —              | —                          | —                  |
| ASE Test Limited   | 659,075       | Three-in-one stock exchange and surplus distribution of ASE merger with ASE Materials Inc., and ASE (Chungli) Inc. | 100%               | In August, 2004, the company obtained the 2010-2012 distributed stock dividend and disposed part of the shares on February 2010. | —                          | —                          | —                            | As of December 31, 2018: 44,100,236 shares*<br>Book value: \$2,571,044<br>Amount transferred to treasury: \$1,380,721 | —              | —                          | —                  |
|                    |               |                                                                                                                    |                    | Current Year up to the Date of this Annual Report                                                                                | —                          | —                          | —                            | 44,100,236 shares*<br>Book value: \$2,773,905<br>Amount transferred to treasury: \$1,380,721                          | —              | —                          | —                  |
| J&R Holding Ltd.   | 13,907,259    | Three-in-one stock exchange and surplus distribution of ASE merger with ASE Materials Inc., and ASE (Chungli) Inc. | 100%               | In August, 2004, the company obtained the 2010-2012 distributed stock dividend and disposed part of the shares on February 2010. | —                          | —                          | —                            | As of December 31, 2018: 23,351,881 shares<br>Book value: \$1,361,415<br>Amount transferred to treasury: \$381,709    | —              | —                          | —                  |
|                    |               |                                                                                                                    |                    | Current Year up to the Date of this Annual Report                                                                                | —                          | —                          | —                            | 23,351,881 shares<br>Book value: \$1,495,941<br>Amount transferred to treasury: \$381,709                             | —              | —                          | —                  |

\*The Company's stock held by ASE Test Limited 44,100,236 shares, are all trusted under a specific account which is without retaining the power to decide the allocation of the trust assets.

### 8.4 Other Supplementary Notes: None



## IX. Other Issues:

Events Regulated in Article 36, Paragraph 3, Subparagraph 2 of the Securities and Exchange Act That Have Impacts on Shareholders' Equity or the Price of Securities during the Current Fiscal Year up to the Date of Publication of the Annual Report: None.

**ASE Technology Holding Co., Ltd.**

**Founder: Jason C.S. Chang**

Date: February 28, 2019

Stock No. : 3711

NYSE : ASX



**ASE Technology Holding Co., Ltd.**

**Annual Report 2018 ( Ⅱ )**

**Financial Statements**

Print date : February 28, 2019

**ASE Technology Holding Co., Ltd.  
and Subsidiaries**

**Consolidated Financial Statements for the  
Years Ended December 31, 2018 and 2017 and  
Independent Auditors' Report**

## **REPRESENTATION LETTER**

The entities that are required to be included in the combined financial statements of ASE Technology Holding Co., Ltd. as of and for the year ended December 31, 2018, under the Criteria Governing the Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises are the same as those included in the consolidated financial statements prepared in conformity with the International Financial Reporting Standards No. 10, "Consolidated Financial Statements." In addition, the information required to be disclosed in the combined financial statements is included in the consolidated financial statements. Consequently, ASE Technology Holding Co., Ltd. and Subsidiaries do not prepare a separate set of combined financial statements.

Very truly yours,

ASE Technology Holding Co., Ltd.

By

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JASON C.S. CHANG

Chairman

February 26, 2019

## INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders  
ASE Technology Holding Co., Ltd.

### Opinion

We have audited the accompanying consolidated financial statements of ASE Technology Holding Co., Ltd. (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated balance sheets as of December 31, 2018 and 2017, and the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "consolidated financial statements").

In our opinion, based on our audits and the report of other auditors (please refer to the Other Matter paragraph), the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2018 and 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

### Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the year ended December 31, 2018. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

The key audit matter of the Group's consolidated financial statements for the year ended December 31, 2018 is discussed as follows.

#### The Identification and Valuation of Intangible Assets from Acquisition of Subsidiaries

The Company completed the acquisition of Siliconware Precision Industries Co., Ltd. (SPIL) in April 2018 at the consideration of NT\$168,440,585 thousand. There were goodwill of NT\$39,334,426 thousand and the other intangible assets of NT\$29,338,821 thousand arose from the acquisition and constituted 13% of total assets of



the Group as of December 31, 2018, which was significant to the accompanying consolidated financial statements taken as a whole. Management has completed the identification of the difference between the cost of the investment and the Company's share of the net fair value of SPIL's identifiable assets and liabilities.

While identifying the difference between the cost of the investment and the Group's share of the net fair value of SPIL's identifiable assets and liabilities, management estimated the fair value of the intangible assets using the related estimated cash flow projections or relief from expenses. Certain assumptions were of high uncertainty since they required management to make significant estimates and judgment related to semiconductor industry varied by economic trends. In addition, it also had impact on the amortization recognized based on the estimated economic beneficial lives and the impairment assessment of those identified intangible assets in the future. Therefore, we determined that identification and valuation of intangible assets from the acquisition of SPIL as a key audit matter.

Please refer to Notes 4(d) and (e), 5 and 30 to the consolidated financial statements for related accounting policies and the uncertainty around the accounting estimates and assumptions regarding the investment in SPIL.

In addition to the understanding of the management's process of identification and valuation of intangible assets from the acquisition of SPIL's shareholdings, our key audit procedures included the followings:

1. We inquired and evaluated the professional competency and objectivity of the external appraisers engaged by the management in the process of identification and valuation of intangible assets.
2. We assessed the reasonableness of the management's assumptions in the process of identification and valuation of intangible assets. We also engaged our valuation specialists in evaluating the reasonableness of the valuation report issued by the external appraisers, including the valuation model used, the factors applied, the categories of intangible assets identified and the related economic benefit lives estimated in the valuation report. Our valuation specialists also tested the mathematical accuracy of the calculation in the valuation report.
3. We tested the accuracy of the amortization expenses recognized for those identified intangible assets and evaluated the completeness and reasonableness of the disclosures regarding the acquisition of subsidiaries in the consolidated financial statements.

### **Emphasis of Matter**

As discussed in Note 1 to the consolidated financial statements, the share exchange was conducted on April 30, 2018 (date of incorporation) in accordance with the joint share exchange agreement at an exchange ratio of 1 ordinary share of Advanced Semiconductor Engineering, Inc. (ASE) for 0.5 ordinary share of the Company, and then the Company owned 100% shareholdings of ASE. The aforementioned share exchange transaction was an organization restructure under common control that the Company was essentially the continuation of ASE. The related assets and liabilities in the Company's consolidated financial statements before the date of incorporation were recognized based on the carrying amounts of those in ASE's consolidated financial statements. The consolidated financial statements of the Company for prior periods are prepared under the assumption that the Company owned 100% shareholdings of ASE at the very beginning.

### **Other Matter**

We did not audit the financial statements of SPIL, the Group's investment in which was accounted for (1) as a consolidated subsidiary as of December 31, 2018 and for the period from April 30, 2018 through December 31, 2018 and (2) as an investment accounted for using the equity method as of December 31, 2017 and for the year then ended, and the period from January 1, 2018 through April 29, 2018, but such financial statements were audited by other auditors. Our opinion, insofar as it relates to the amounts included for SPIL, is based solely on the report of other auditors. The total assets of SPIL as of December 31, 2018 constituted 22% of the Group's consolidated total assets and the total revenues for the period from April 30, 2018 through December 31, 2018 of SPIL constituted 17% of the Group's consolidated total revenues. The accompanying consolidated financial statements of the Group included its equity investment in SPIL constituting 12% of the Group's consolidated total assets as of December 31, 2017, and its share of profit in SPIL constituting 0% and 3% of the Group's total



consolidated net profit for the period from January 1, 2018 through April 29, 2018 and for the year ended December 31, 2017, respectively.

We have also audited the parent company only financial statements of the Company and ASE for the years ended December 31, 2018 and 2017, respectively, on which we have expressed an unmodified opinion with emphasis of matter paragraph and other matter paragraph.

### **Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements**

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and IFRS, IAS, IFRIC, and SIC endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the audit committee, are responsible for overseeing the Group's financial reporting process.

### **Auditors' Responsibilities for the Audit of the Consolidated Financial Statements**

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with the auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
6. Obtain sufficient and appropriate audit evidence regarding the financial information of entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision, and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements for the year ended December 31, 2018 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Jia-Ling Chiang and Cheng-Hung Kuo.

Deloitte & Touche  
Taipei, Taiwan  
Republic of China

February 26, 2019

#### Notice to Readers

*The accompanying consolidated financial statements are intended only to present the consolidated financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to audit such consolidated financial statements are those generally applied in the Republic of China.*

*For the convenience of readers, the independent auditors' report and the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and consolidated financial statements shall prevail.*



# ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS

(In Thousands of New Taiwan Dollars)

| ASSETS                                                                                   | December 31, 2018     |            | December 31, 2017     |            |
|------------------------------------------------------------------------------------------|-----------------------|------------|-----------------------|------------|
|                                                                                          | NT\$                  | %          | NT\$                  | %          |
| <b>CURRENT ASSETS</b>                                                                    |                       |            |                       |            |
| Cash and cash equivalents (Note 6)                                                       | \$ 51,518,436         | 10         | \$ 46,078,066         | 13         |
| Financial assets at fair value through profit or loss - current (Note 7)                 | 7,262,227             | 1          | 5,223,067             | 1          |
| Available-for-sale financial assets - current (Note 10)                                  | -                     | -          | 89,159                | -          |
| Contract assets - current (Notes 3 and 42)                                               | 4,488,500             | 1          | -                     | -          |
| Trade receivables, net (Note 11)                                                         | 79,481,359            | 15         | 55,200,706            | 15         |
| Other receivables                                                                        | 1,283,180             | -          | 1,051,955             | -          |
| Current tax assets (Note 27)                                                             | 524,263               | -          | 260,542               | -          |
| Inventories (Note 12)                                                                    | 36,627,451            | 7          | 24,260,911            | 7          |
| Inventories related to real estate business (Notes 13 and 38)                            | 10,060,608            | 2          | 9,819,516             | 3          |
| Other financial assets - current (Notes 14 and 38)                                       | 6,539,467             | 1          | 472,340               | -          |
| Other current assets                                                                     | 3,773,384             | 1          | 2,482,010             | 1          |
| Total current assets                                                                     | 201,558,875           | 38         | 144,938,272           | 40         |
| <b>NON-CURRENT ASSETS</b>                                                                |                       |            |                       |            |
| Financial assets at fair value through profit or loss - non-current (Note 7)             | 636,231               | -          | -                     | -          |
| Financial assets at fair value through other comprehensive income - non-current (Note 8) | 1,597,323             | -          | -                     | -          |
| Available-for-sale financial assets - non-current (Note 10)                              | -                     | -          | 1,123,006             | -          |
| Investments accounted for using the equity method (Note 15)                              | 9,277,389             | 2          | 48,689,265            | 14         |
| Property, plant and equipment (Notes 16, 26 and 39)                                      | 214,592,588           | 40         | 135,168,406           | 37         |
| Investment properties (Notes 17, 26 and 38)                                              | 7,738,379             | 2          | 8,119,436             | 2          |
| Goodwill (Notes 18 and 30)                                                               | 49,318,641            | 9          | 9,934,494             | 3          |
| Other intangible assets (Notes 19, 26, 30 and 37)                                        | 30,897,700            | 6          | 1,406,865             | -          |
| Deferred tax assets (Note 27)                                                            | 5,108,357             | 1          | 4,001,821             | 1          |
| Other financial assets - non-current (Notes 14 and 38)                                   | 1,044,294             | -          | 1,170,500             | -          |
| Long-term prepayments for lease (Notes 20 and 38)                                        | 10,764,835            | 2          | 8,851,330             | 3          |
| Other non-current assets                                                                 | 836,591               | -          | 454,391               | -          |
| Total non-current assets                                                                 | 331,812,328           | 62         | 218,919,514           | 60         |
| <b>TOTAL</b>                                                                             | <b>\$ 533,371,203</b> | <b>100</b> | <b>\$ 363,857,786</b> | <b>100</b> |

(Continued)

# ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS

(In Thousands of New Taiwan Dollars)

| LIABILITIES AND EQUITY                                                        | December 31, 2018     |            | December 31, 2017     |            |
|-------------------------------------------------------------------------------|-----------------------|------------|-----------------------|------------|
|                                                                               | NT\$                  | %          | NT\$                  | %          |
| <b>CURRENT LIABILITIES</b>                                                    |                       |            |                       |            |
| Short-term borrowings (Note 21)                                               | \$ 43,263,469         | 8          | \$ 17,962,471         | 5          |
| Financial liabilities at fair value through profit or loss - current (Note 7) | 36,655                | -          | 677,430               | -          |
| Financial liabilities for hedging - current (Note 36)                         | 3,899,634             | 1          | -                     | -          |
| Trade payables                                                                | 56,884,116            | 11         | 41,672,233            | 12         |
| Other payables (Note 23)                                                      | 31,003,882            | 6          | 21,377,887            | 6          |
| Current tax liabilities (Note 27)                                             | 4,447,790             | 1          | 4,863,549             | 1          |
| Current portion of bonds payable (Note 22)                                    | -                     | -          | 6,161,197             | 2          |
| Current portion of long-term borrowings (Notes 21 and 38)                     | 10,779,034            | 2          | 8,261,625             | 2          |
| Other current liabilities                                                     | 5,984,156             | 1          | 4,644,566             | 1          |
| Total current liabilities                                                     | 156,298,736           | 30         | 105,620,958           | 29         |
| <b>NON-CURRENT LIABILITIES</b>                                                |                       |            |                       |            |
| Bonds payable (Note 22)                                                       | 16,985,936            | 3          | 16,981,583            | 5          |
| Long-term borrowings (Notes 21 and 38)                                        | 127,119,295           | 24         | 27,145,003            | 8          |
| Deferred tax liabilities (Note 27)                                            | 5,806,713             | 1          | 4,961,487             | 1          |
| Net defined benefit liabilities (Note 24)                                     | 5,118,677             | 1          | 3,936,685             | 1          |
| Other non-current liabilities                                                 | 1,371,302             | -          | 1,210,590             | -          |
| Total non-current liabilities                                                 | 156,401,923           | 29         | 54,235,348            | 15         |
| Total liabilities                                                             | 312,700,659           | 59         | 159,856,306           | 44         |
| <b>EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY (Note 25)</b>                 |                       |            |                       |            |
| Share capital                                                                 |                       |            |                       |            |
| Ordinary shares                                                               | 43,201,486            | 8          | 87,246,194            | 24         |
| Shares subscribed in advance                                                  | 15,658                | -          | 134,593               | -          |
| Total share capital                                                           | 43,217,144            | 8          | 87,380,787            | 24         |
| Capital surplus                                                               | 143,275,213           | 27         | 40,622,877            | 11         |
| Retained earnings                                                             |                       |            |                       |            |
| Legal reserve                                                                 | -                     | -          | 16,765,066            | 5          |
| Special reserve                                                               | 3,353,938             | 1          | 3,353,938             | 1          |
| Unappropriated earnings                                                       | 22,038,948            | 4          | 56,287,526            | 15         |
| Total retained earnings                                                       | 25,392,886            | 5          | 76,406,530            | 21         |
| Other equity                                                                  | (6,902,782)           | (1)        | (6,316,138)           | (2)        |
| Treasury shares                                                               | (1,959,107)           | -          | (7,292,513)           | (2)        |
| Equity attributable to owners of the Company                                  | 203,023,354           | 39         | 190,801,543           | 52         |
| <b>NON-CONTROLLING INTERESTS (Note 25)</b>                                    | 17,647,190            | 2          | 13,199,937            | 4          |
| Total equity                                                                  | 220,670,544           | 41         | 204,001,480           | 56         |
| <b>TOTAL</b>                                                                  | <b>\$ 533,371,203</b> | <b>100</b> | <b>\$ 363,857,786</b> | <b>100</b> |

The accompanying notes are an integral part of the consolidated financial statements.  
(With Deloitte & Touche auditors' report dated February 26, 2019)

(Concluded)

# ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Thousands of New Taiwan Dollars Except Earnings Per Share)

|                                                                                           | For the Year Ended December 31 |           |                    |           |
|-------------------------------------------------------------------------------------------|--------------------------------|-----------|--------------------|-----------|
|                                                                                           | 2018                           |           | 2017               |           |
|                                                                                           | NT\$                           | %         | NT\$               | %         |
| OPERATING REVENUES (Notes 3 and 42)                                                       | \$ 371,092,421                 | 100       | \$ 290,441,208     | 100       |
| OPERATING COSTS (Notes 12 and 26)                                                         | <u>309,929,371</u>             | <u>84</u> | <u>237,708,937</u> | <u>82</u> |
| GROSS PROFIT                                                                              | <u>61,163,050</u>              | <u>16</u> | <u>52,732,271</u>  | <u>18</u> |
| OPERATING EXPENSES (Note 26)                                                              |                                |           |                    |           |
| Selling and marketing expenses                                                            | 4,933,602                      | 1         | 3,308,992          | 1         |
| General and administrative expenses                                                       | 14,618,900                     | 4         | 12,458,054         | 4         |
| Research and development expenses                                                         | <u>14,962,799</u>              | <u>4</u>  | <u>11,746,613</u>  | <u>4</u>  |
| Total operating expenses                                                                  | <u>34,515,301</u>              | <u>9</u>  | <u>27,513,659</u>  | <u>9</u>  |
| PROFIT FROM OPERATIONS                                                                    | <u>26,647,749</u>              | <u>7</u>  | <u>25,218,612</u>  | <u>9</u>  |
| NON-OPERATING INCOME AND EXPENSES                                                         |                                |           |                    |           |
| Other income (Note 26)                                                                    | 1,274,969                      | 1         | 839,324            | -         |
| Other gains, net (Note 26)                                                                | 8,213,919                      | 2         | 6,236,439          | 2         |
| Finance costs (Note 26)                                                                   | (3,568,241 )                   | (1 )      | (1,799,494 )       | -         |
| Share of the profit or loss of associates and joint ventures                              | <u>(520,958 )</u>              | <u>-</u>  | <u>434,017</u>     | <u>-</u>  |
| Total non-operating income and expenses                                                   | <u>5,399,689</u>               | <u>2</u>  | <u>5,710,286</u>   | <u>2</u>  |
| PROFIT BEFORE INCOME TAX                                                                  | 32,047,438                     | 9         | 30,928,898         | 11        |
| INCOME TAX EXPENSE (Note 27)                                                              | <u>5,583,599</u>               | <u>2</u>  | <u>6,261,532</u>   | <u>2</u>  |
| NET PROFIT FOR THE YEAR                                                                   | <u>26,463,839</u>              | <u>7</u>  | <u>24,667,366</u>  | <u>9</u>  |
| OTHER COMPREHENSIVE INCOME (LOSS)                                                         |                                |           |                    |           |
| Items that will not be reclassified subsequently to profit or loss:                       |                                |           |                    |           |
| Remeasurement of defined benefit obligation                                               | (308,180 )                     | -         | 205,344            | -         |
| Unrealized loss on equity investments at fair value through other comprehensive income    | (422,441 )                     | -         | -                  | -         |
| Share of other comprehensive income (loss) of associates and joint ventures               | (558,217 )                     | -         | 7,249              | -         |
| Income tax relating to items that will not be reclassified subsequently to profit or loss | <u>134,853</u>                 | <u>-</u>  | <u>(51,217 )</u>   | <u>-</u>  |
|                                                                                           | <u>(1,153,985 )</u>            | <u>-</u>  | <u>161,376</u>     | <u>-</u>  |

(Continued)

# ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Thousands of New Taiwan Dollars Except Earnings Per Share)

|                                                                                                                                                                                                         | For the Year Ended December 31 |          |                      |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------|----------------------|-------------|
|                                                                                                                                                                                                         | 2018                           |          | 2017                 |             |
|                                                                                                                                                                                                         | NT\$                           | %        | NT\$                 | %           |
| Items that may be reclassified subsequently to profit or loss:                                                                                                                                          |                                |          |                      |             |
| Exchange differences on translating foreign operations                                                                                                                                                  | \$ 227,821                     | -        | \$ (5,287,734 )      | (2 )        |
| Unrealized gain on available-for-sale financial assets                                                                                                                                                  | -                              | -        | 224,036              | -           |
| Unrealized loss on debt investments at fair value through other comprehensive income                                                                                                                    | (63,076 )                      | -        | -                    | -           |
| Share of other comprehensive income of associates and joint ventures                                                                                                                                    | 136,608                        | -        | 301,977              | -           |
|                                                                                                                                                                                                         | <u>301,353</u>                 | <u>-</u> | <u>(4,761,721 )</u>  | <u>(2 )</u> |
| Other comprehensive loss for the year, net of income tax                                                                                                                                                | <u>(852,632 )</u>              | <u>-</u> | <u>(4,600,345 )</u>  | <u>(2 )</u> |
| TOTAL COMPREHENSIVE INCOME FOR THE YEAR                                                                                                                                                                 | <u>\$ 25,611,207</u>           | <u>7</u> | <u>\$ 20,067,021</u> | <u>7</u>    |
| NET PROFIT ATTRIBUTABLE TO:                                                                                                                                                                             |                                |          |                      |             |
| Owners of the Company                                                                                                                                                                                   | \$ 25,262,356                  | 7        | \$ 22,987,819        | 8           |
| Non-controlling interests                                                                                                                                                                               | <u>1,201,483</u>               | <u>-</u> | <u>1,679,547</u>     | <u>1</u>    |
|                                                                                                                                                                                                         | <u>\$ 26,463,839</u>           | <u>7</u> | <u>\$ 24,667,366</u> | <u>9</u>    |
| TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:                                                                                                                                                             |                                |          |                      |             |
| Owners of the Company                                                                                                                                                                                   | \$ 24,662,096                  | 7        | \$ 18,730,355        | 7           |
| Non-controlling interests                                                                                                                                                                               | <u>949,111</u>                 | <u>-</u> | <u>1,336,666</u>     | <u>-</u>    |
|                                                                                                                                                                                                         | <u>\$ 25,611,207</u>           | <u>7</u> | <u>\$ 20,067,021</u> | <u>7</u>    |
| EARNINGS PER SHARE (4,080,443 thousand and 4,184,620 thousand shares were used in the computation of basic and diluted earnings per share, respectively, for the year ended December 31, 2017, Note 28) |                                |          |                      |             |
| Basic                                                                                                                                                                                                   | <u>\$ 5.95</u>                 |          | <u>\$ 5.63</u>       |             |
| Diluted                                                                                                                                                                                                 | <u>\$ 5.84</u>                 |          | <u>\$ 5.23</u>       |             |

The accompanying notes are an integral part of the consolidated financial statements.

(With Deloitte & Touche auditors' report dated February 26, 2019)

(Concluded)

ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY  
(In Thousands of New Taiwan Dollars)

|                                                                                                          | Equity Attributable to Owners of the Company |               |                 |                   |                 |                         |               |                                                        |                                                               |                                                                                             |                 |                 |                |                           |                |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------|-----------------|-------------------|-----------------|-------------------------|---------------|--------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------|-----------------|----------------|---------------------------|----------------|
|                                                                                                          |                                              |               |                 |                   |                 |                         |               | Other Equity                                           |                                                               |                                                                                             |                 |                 |                |                           |                |
|                                                                                                          | Share Capital                                |               | Capital Surplus | Retained Earnings |                 |                         |               | Exchange Differences on Translating Foreign Operations | Unrealized Gain (Loss) on Available-for-sale Financial Assets | Unrealized Gain (Loss) on Financial Assets at Fair Value Through Other Comprehensive Income | Total           | Treasury Shares | Total          | Non-controlling Interests | Total Equity   |
|                                                                                                          | Shares (In Thousands)                        | Amounts       |                 | Legal Reserve     | Special Reserve | Unappropriated Earnings | Total         |                                                        |                                                               |                                                                                             |                 |                 |                |                           |                |
| BALANCE AT JANUARY 1, 2017                                                                               | 7,946,184                                    | \$ 79,568,040 | \$ 22,265,049   | \$ 14,597,032     | \$ 3,353,938    | \$ 46,710,051           | \$ 64,661,021 | \$ (1,642,724 )                                        | \$ (240,850 )                                                 | \$ -                                                                                        | \$ (1,883,574 ) | \$ (7,292,513 ) | \$ 157,318,023 | \$ 12,008,753             | \$ 169,326,776 |
| Appropriation of 2016 earnings                                                                           |                                              |               |                 |                   |                 |                         |               |                                                        |                                                               |                                                                                             |                 |                 |                |                           |                |
| Legal reserve                                                                                            | -                                            | -             | -               | 2,168,034         | -               | (2,168,034 )            | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | -              | -                         | -              |
| Cash dividends distributed by the Company                                                                | -                                            | -             | -               | -                 | -               | (11,415,198 )           | (11,415,198 ) | -                                                      | -                                                             | -                                                                                           | -               | -               | (11,415,198 )  | -                         | (11,415,198 )  |
|                                                                                                          | -                                            | -             | -               | 2,168,034         | -               | (13,583,232 )           | (11,415,198 ) | -                                                      | -                                                             | -                                                                                           | -               | -               | (11,415,198 )  | -                         | (11,415,198 )  |
| Change from investments in associates and joint ventures accounted for using the equity method           | -                                            | -             | 1,490           | -                 | -               | (2,212 )                | (2,212 )      | -                                                      | -                                                             | -                                                                                           | -               | -               | (722 )         | -                         | (722 )         |
| Net profit for the year ended December 31, 2017                                                          | -                                            | -             | -               | -                 | -               | 22,987,819              | 22,987,819    | -                                                      | -                                                             | -                                                                                           | -               | -               | 22,987,819     | 1,679,547                 | 24,667,366     |
| Other comprehensive income (loss) for the year ended December 31, 2017, net of income tax                | -                                            | -             | -               | -                 | -               | 175,100                 | 175,100       | (5,090,036 )                                           | 657,472                                                       | -                                                                                           | (4,432,564 )    | -               | (4,257,464 )   | (342,881 )                | (4,600,345 )   |
| Total comprehensive income (loss) for the year ended December 31, 2017                                   | -                                            | -             | -               | -                 | -               | 23,162,919              | 23,162,919    | (5,090,036 )                                           | 657,472                                                       | -                                                                                           | (4,432,564 )    | -               | 18,730,355     | 1,336,666                 | 20,067,021     |
| Issue of ordinary shares for capital increase by cash (Note 25)                                          | 300,000                                      | 3,000,000     | 7,290,000       | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | 10,290,000     | -                         | 10,290,000     |
| Issue of ordinary shares under conversion of bonds (Notes 22 and 25)                                     | 424,258                                      | 4,242,577     | 9,657,905       | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | 13,900,482     | -                         | 13,900,482     |
| Issue of dividends received by subsidiaries from the Company                                             | -                                            | -             | 200,977         | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | 200,977        | -                         | 200,977        |
| Changes in percentage of ownership interest in subsidiaries (Note 32)                                    | -                                            | -             | 3,055           | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | 3,055          | (3,055 )                  | -              |
| Issue of ordinary shares under employee share options (Note 29)                                          | 67,637                                       | 570,170       | 1,256,789       | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | 1,826,959      | (159,200 )                | 1,667,759      |
| Cash dividends distributed by subsidiaries                                                               | -                                            | -             | -               | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | -              | (246,440 )                | (246,440 )     |
| Additional non-controlling interest arising on issue of employee share options by subsidiaries (Note 29) | -                                            | -             | (52,388 )       | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | (52,388 )      | 263,213                   | 210,825        |
| BALANCE AT DECEMBER 31, 2017                                                                             | 8,738,079                                    | \$ 87,380,787 | \$ 40,622,877   | \$ 16,765,066     | \$ 3,353,938    | \$ 56,287,526           | \$ 76,406,530 | \$ (6,732,760 )                                        | \$ 416,622                                                    | \$ -                                                                                        | \$ (6,316,138 ) | \$ (7,292,513 ) | \$ 190,801,543 | \$ 13,199,937             | \$ 204,001,480 |
| BALANCE AT JANUARY 1, 2018                                                                               | 8,738,079                                    | \$ 87,380,787 | \$ 40,622,877   | \$ 16,765,066     | \$ 3,353,938    | \$ 56,287,526           | \$ 76,406,530 | \$ (6,732,760 )                                        | \$ 416,622                                                    | \$ -                                                                                        | \$ (6,316,138 ) | \$ (7,292,513 ) | \$ 190,801,543 | \$ 13,199,937             | \$ 204,001,480 |
| Effect of retrospective applications (Note 3)                                                            | -                                            | -             | -               | -                 | -               | 880,368                 | 880,368       | -                                                      | (416,622 )                                                    | 135,517                                                                                     | (281,105 )      | -               | 599,263        | 5,183                     | 604,446        |
| ADJUSTED BALANCE AT JANUARY 1, 2018                                                                      | 8,738,079                                    | 87,380,787    | 40,622,877      | 16,765,066        | 3,353,938       | 57,167,894              | 77,286,898    | (6,732,760 )                                           | -                                                             | 135,517                                                                                     | (6,597,243 )    | (7,292,513 )    | 191,400,806    | 13,205,120                | 204,605,926    |
| Change from investments in associates and joint ventures accounted for using the equity method           | -                                            | -             | 1,411,899       | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | 1,411,899      | -                         | 1,411,899      |
| Cash dividends paid from capital surplus (Note 25)                                                       | -                                            | -             | (10,795,980 )   | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | (10,795,980 )  | -                         | (10,795,980 )  |
| Other changes in the capital surplus                                                                     | -                                            | -             | 872             | -                 | -               | -                       | -             | -                                                      | -                                                             | -                                                                                           | -               | -               | 872            | -                         | 872            |
| Net profit for the year ended December 31, 2018                                                          | -                                            | -             | -               | -                 | -               | 25,262,356              | 25,262,356    | -                                                      | -                                                             | -                                                                                           | -               | -               | 25,262,356     | 1,201,483                 | 26,463,839     |
| Other comprehensive income (loss) for the year ended December 31, 2018, net of income tax                | -                                            | -             | -               | -                 | -               | (146,194 )              | (146,194 )    | 562,794                                                | -                                                             | (1,016,860 )                                                                                | (454,066 )      | -               | (600,260 )     | (252,372 )                | (852,632 )     |
| Total comprehensive income (loss) for the year ended December 31, 2018, net of income tax                | -                                            | -             | -               | -                 | -               | 25,116,162              | 25,116,162    | 562,794                                                | -                                                             | (1,016,860 )                                                                                | (454,066 )      | -               | 24,662,096     | 949,111                   | 25,611,207     |

(Continued)

ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY  
(In Thousands of New Taiwan Dollars)

|                                                                                                                      | Equity Attributable to Owners of the Company |                  |                 |                   |                 |                         |                  |                                                        |                                                               |                                                                                             |                 |                 |                |                           |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------|-----------------|-------------------|-----------------|-------------------------|------------------|--------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------|-----------------|----------------|---------------------------|
|                                                                                                                      |                                              |                  |                 |                   |                 |                         |                  | Other Equity                                           |                                                               |                                                                                             |                 |                 |                |                           |
|                                                                                                                      | Share Capital                                |                  |                 | Retained Earnings |                 |                         |                  | Exchange Differences on Translating Foreign Operations | Unrealized Gain (Loss) on Available-for-sale Financial Assets | Unrealized Gain (Loss) on Financial Assets at Fair Value Through Other Comprehensive Income | Total           | Treasury Shares | Total          | Non-controlling Interests |
|                                                                                                                      | Shares (In Thousands)                        | Amounts          | Capital Surplus | Legal Reserve     | Special Reserve | Unappropriated Earnings | Total            |                                                        |                                                               |                                                                                             |                 |                 |                |                           |
| Effect of the joint share exchange (Note 25)                                                                         | (4,318,392 )                                 | \$ (43,183,919 ) | \$ 117,693,658  | \$ (16,765,066 )  | \$ -            | \$ (57,744,673 )        | \$ (74,509,739 ) | \$ -                                                   | \$ -                                                          | \$ -                                                                                        | \$ -            | \$ -            | \$ -           | \$ -                      |
| Buy-back of ordinary shares                                                                                          | -                                            | -                | -               | -                 | -               | -                       | -                | -                                                      | -                                                             | -                                                                                           | -               | (71,302 )       | (71,302 )      | -                         |
| Cancellation of treasury shares                                                                                      | (121,852 )                                   | (1,218,520 )     | (1,480,903 )    | -                 | -               | (2,705,285 )            | (2,705,285 )     | -                                                      | -                                                             | -                                                                                           | -               | 5,404,708       | -              | -                         |
| Issue of dividends received by subsidiaries from the Company                                                         | -                                            | -                | 182,354         | -                 | -               | -                       | -                | -                                                      | -                                                             | -                                                                                           | -               | -               | 182,354        | -                         |
| Disposal of interest in associates and joint ventures accounted for using the equity method (Note 15)                | -                                            | -                | (1,408,495 )    | -                 | -               | 204,450                 | 204,450          | 282,291                                                | -                                                             | (133,364 )                                                                                  | 148,927         | -               | (1,055,118 )   | -                         |
| Differences between consideration and carrying amount arising from acquisition or disposal of subsidiaries (Note 32) | -                                            | -                | (1,142,856 )    | -                 | -               | -                       | -                | -                                                      | -                                                             | -                                                                                           | -               | -               | (1,142,856 )   | 2,783,015                 |
| Changes in percentage of ownership interest in subsidiaries (Note 32)                                                | -                                            | -                | (1,118,102 )    | -                 | -               | -                       | -                | -                                                      | -                                                             | -                                                                                           | -               | -               | (1,118,102 )   | (801,884 )                |
| Issue of ordinary shares under employee share options (Note 29)                                                      | 23,879                                       | 238,796          | 549,345         | -                 | -               | -                       | -                | -                                                      | -                                                             | -                                                                                           | -               | -               | 788,141        | -                         |
| Cash dividends distributed by subsidiaries                                                                           | -                                            | -                | -               | -                 | -               | -                       | -                | -                                                      | -                                                             | -                                                                                           | -               | -               | -              | (424,815 )                |
| Additional non-controlling interest arising on issue of employee share options by subsidiaries (Note 29)             | -                                            | -                | (1,239,456 )    | -                 | -               | -                       | -                | -                                                      | -                                                             | -                                                                                           | -               | -               | (1,239,456 )   | 1,936,643                 |
| Fair value through other comprehensive income - equity instruments                                                   | -                                            | -                | -               | -                 | -               | 400                     | 400              | -                                                      | -                                                             | (400 )                                                                                      | (400 )          | -               | -              | -                         |
| BALANCE AT DECEMBER 31, 2018                                                                                         | 4,321,714                                    | \$ 43,217,144    | \$ 143,275,213  | \$ -              | \$ 3,353,938    | \$ 22,038,948           | \$ 25,392,886    | \$ (5,887,675 )                                        | \$ -                                                          | \$ (1,015,107 )                                                                             | \$ (6,902,782 ) | \$ (1,959,107 ) | \$ 203,023,354 | \$ 17,647,190             |

The accompanying notes are an integral part of the consolidated financial statements.

(With Deloitte & Touche auditors’ report dated February 26, 2019) (Concluded)

# ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

|                                                                                                               | For the Year Ended December 31 |               |
|---------------------------------------------------------------------------------------------------------------|--------------------------------|---------------|
|                                                                                                               | 2018                           | 2017          |
|                                                                                                               | NT\$                           | NT\$          |
| CASH FLOWS FROM OPERATING ACTIVITIES                                                                          |                                |               |
| Profit before income tax                                                                                      | \$ 32,047,438                  | \$ 30,928,898 |
| Adjustments for:                                                                                              |                                |               |
| Depreciation expense                                                                                          | 40,286,453                     | 28,747,518    |
| Amortization expense                                                                                          | 2,402,450                      | 457,666       |
| Net loss (gain) on fair value change of financial assets and liabilities at fair value through profit or loss | (1,989,490 )                   | 2,783,902     |
| Finance costs                                                                                                 | 3,568,241                      | 1,799,494     |
| Interest income                                                                                               | (466,211 )                     | (306,871 )    |
| Dividend income                                                                                               | (190,397 )                     | (59,039 )     |
| Compensation cost of employee share options                                                                   | 215,648                        | 438,765       |
| Share of (profit) loss of associates and joint ventures                                                       | 520,958                        | (434,017 )    |
| Loss (gain) on disposal of property, plant and equipment                                                      | 56,902                         | (348,070 )    |
| Impairment loss recognized on financial assets                                                                | 675,624                        | 77,101        |
| Impairment loss recognized on non-financial assets                                                            | 1,113,998                      | 1,113,499     |
| Reversal of impairment loss recognized on non-assets                                                          | (100,000 )                     | -             |
| Gain on disposal of subsidiaries                                                                              | -                              | (5,589,457 )  |
| Remeasurement gain on investments accounted for the equity method                                             | (7,571,882 )                   | -             |
| Net (gain) loss on foreign currency exchange                                                                  | 1,360,380                      | (2,356,480 )  |
| Others                                                                                                        | 1,142,735                      | 1,172,005     |
| Changes in operating assets and liabilities                                                                   |                                |               |
| Financial assets held for trading                                                                             | -                              | (226,049 )    |
| Financial assets mandatorily at fair value through profit or loss                                             | 345,540                        | -             |
| Contract assets                                                                                               | (508,166 )                     | -             |
| Trade receivables                                                                                             | (9,313,539 )                   | (4,066,374 )  |
| Other receivables                                                                                             | 443,517                        | (330,491 )    |
| Inventories                                                                                                   | (9,249,714 )                   | (2,907,848 )  |
| Other current assets                                                                                          | (385,172 )                     | (781,477 )    |
| Financial liabilities held for trading                                                                        | (2,039,771 )                   | (3,874,662 )  |
| Trade payables                                                                                                | 6,989,198                      | 4,753,270     |
| Other payables                                                                                                | 1,016,338                      | 685,398       |
| Other current liabilities                                                                                     | 228,190                        | 211,145       |
| Other operating activities items                                                                              | (281,736 )                     | 27,538        |
| Cash generated from operations                                                                                | 60,317,532                     | 51,915,364    |
| Interest received                                                                                             | 523,679                        | 236,746       |
| Dividend received                                                                                             | 297,882                        | 1,929,218     |
| Interest paid                                                                                                 | (3,239,159 )                   | (1,666,759 )  |
| Income tax paid                                                                                               | (6,825,243 )                   | (4,983,769 )  |
| Net cash generated from operating activities                                                                  | 51,074,691                     | 47,430,800    |

(Continued)

# ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

|                                                                                          | For the Year Ended December 31 |               |
|------------------------------------------------------------------------------------------|--------------------------------|---------------|
|                                                                                          | 2018                           | 2017          |
|                                                                                          | NT\$                           | NT\$          |
| <b>CASH FLOWS FROM INVESTING ACTIVITIES</b>                                              |                                |               |
| Purchase of financial assets at fair value through other comprehensive income            | \$ (105,000 )                  | \$ -          |
| Proceeds on sale of financial assets at fair value through other comprehensive income    | 94,217                         | -             |
| Return of capital from financial assets at fair value through other comprehensive income | 116,278                        | -             |
| Purchase of financial assets designated as at fair value through profit or loss          | -                              | (61,308,095 ) |
| Proceeds on sale of financial assets designated as at fair value through profit or loss  | -                              | 61,601,865    |
| Purchase of available-for-sale financial assets                                          | -                              | (902,648 )    |
| Proceeds on sale of available-for-sale financial assets                                  | -                              | 1,121,517     |
| Cash received from return of capital by available-for-sale financial assets              | -                              | 16,175        |
| Acquisition of associates and joint ventures                                             | (451,563 )                     | -             |
| Net cash outflow on acquisition of subsidiaries                                          | (95,241,855 )                  | -             |
| Net cash inflow from disposal of subsidiaries                                            | -                              | 7,020,883     |
| Cash received from return of capital by investees accounted for using the equity method  | 262,941                        | -             |
| Payments for property, plant and equipment                                               | (41,386,443 )                  | (24,699,240 ) |
| Proceeds from disposal of property, plant and equipment                                  | 1,127,644                      | 1,488,210     |
| Payments for intangible assets                                                           | (577,765 )                     | (337,984 )    |
| Proceeds from disposal of intangible assets                                              | -                              | 34,690        |
| Payments for investment properties                                                       | (125,764 )                     | (186,522 )    |
| Decrease in other financial assets                                                       | 6,208,527                      | 236,227       |
| Increase in other non-current assets                                                     | (1,970,772 )                   | (171,320 )    |
| Proceeds from financial liabilities for hedging                                          | 2,507,233                      | -             |
| Net cash used in investing activities                                                    | (129,542,322 )                 | (16,086,242 ) |
| <b>CASH FLOWS FROM FINANCING ACTIVITIES</b>                                              |                                |               |
| Net proceeds from (repayment of) short-term borrowings                                   | 22,327,813                     | (2,038,993 )  |
| Proceeds from bonds offering                                                             | -                              | 8,000,000     |
| Repayment of bonds payable                                                               | (6,185,600 )                   | (9,123,972 )  |
| Proceeds from long-term borrowings                                                       | 199,743,582                    | 35,394,158    |
| Repayment of long-term borrowings                                                        | (114,232,623 )                 | (51,867,539 ) |
| Dividends paid                                                                           | (10,613,626 )                  | (11,214,221 ) |
| Proceeds from capital increase by cash                                                   | -                              | 10,290,000    |
| Proceeds from exercise of employee share options                                         | 1,269,680                      | 1,439,819     |
| Payments for buy-back of ordinary shares                                                 | (71,302 )                      | -             |
| Proceeds from disposal of interests in subsidiaries                                      | 2,807,568                      | -             |
| Decrease in non-controlling interests                                                    | (11,820,227 )                  | (246,440 )    |
| Other financing activities items                                                         | (113,859 )                     | 43,761        |

(Continued)



# ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

|                                                                                    | <b>For the Year Ended December 31</b> |                             |
|------------------------------------------------------------------------------------|---------------------------------------|-----------------------------|
|                                                                                    | <b>2018</b>                           | <b>2017</b>                 |
|                                                                                    | <b>NT\$</b>                           | <b>NT\$</b>                 |
| Net cash generated from (used in) financing activities                             | <u>\$ 83,111,406</u>                  | <u>\$ (19,323,427 )</u>     |
| EFFECTS OF EXCHANGE RATE CHANGES ON<br>THE BALANCE OF CASH AND CASH<br>EQUIVALENTS | <u>796,595</u>                        | <u>(4,335,589 )</u>         |
| NET INCREASE IN CASH AND CASH EQUIVALENTS                                          | 5,440,370                             | 7,685,542                   |
| CASH AND CASH EQUIVALENTS AT THE BEGINNING<br>OF THE YEAR                          | <u>46,078,066</u>                     | <u>38,392,524</u>           |
| CASH AND CASH EQUIVALENTS AT THE END OF<br>THE YEAR                                | <u><u>\$ 51,518,436</u></u>           | <u><u>\$ 46,078,066</u></u> |

The accompanying notes are an integral part of the consolidated financial statements.

(With Deloitte & Touche auditors' report dated February 26, 2019)

(Concluded)

# ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Amounts in Thousands of New Taiwan Dollars, Unless Stated Otherwise)

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### 1. GENERAL INFORMATION

ASE Technology Holding Co., Ltd. (the “Company”) is a corporation incorporated in Nantze Export Processing Zone under the laws of Republic of China (“R.O.C.”) starting from April 30, 2018 (date of incorporation). The Company and its subsidiaries (collectively referred to as the “Group”) offer a comprehensive range of semiconductors packaging, testing, and electronic manufacturing services (“EMS”).

The board of directors of the Company’s subsidiaries, Advanced Semiconductor Engineering, Inc. (symbol “2311”, “ASE”) and Siliconware Precision Industries Co., Ltd. (symbol “2325”, “SPIL”), approved in June 2016 to enter into and execute a joint share exchange agreement to establish the Company and the Company acquired all issued and outstanding ordinary shares of ASE and SPIL in the way of share exchange. The share exchange was conducted at an exchange ratio of 1 ordinary share of ASE for 0.5 ordinary share of the Company, and at NT\$51.2 in cash per SPIL’s ordinary share. The share exchange transaction has been approved both at ASE’s and SPIL’s special shareholders’ meeting on February 12, 2018 and has been completed on April 30, 2018. As a result, ASE and SPIL became wholly-owned subsidiaries of the Company on April 30, 2018, and both of ASE’s and SPIL’s ordinary shares have been delisted while the ordinary shares of the Company were listed starting from the same date under the symbol “3711”. In addition, ASE’s ordinary shares that have been traded on the New York Stock Exchange (the “NYSE”) under the symbol “ASX” in the form of American Depositary Shares (“ADS”) starting from September 2000 were exchanged as the Company’s ADSs under the same symbol “ASX” starting from April 30, 2018.

For enhancing operational flexibility through organization restructure, the board of directors of ASE resolved in October 2018 to spin off its investment department which was responsible for managing the ordinary shares and assets of USI Inc. ( “USIINC”) as well as relevant assets (including assets, liabilities and business) into a newly established company, USI Global Inc. (the “USI Global”). USI Global then issued new ordinary shares to the Company as a consideration. In November 2018, the spin off has been completed and the Company has obtained control over ASE and USI Global. In December 2018, the board of directors of the Company and USI Global further resolved to proceed with the merger which was completed in January 2019. After the merger, the Company is the surviving company while USI Global is the dissolving company. The aforementioned spin off and merger have no material effect on the Group’s financial position and financial performance.

The ordinary shares of the Company’s subsidiary, Universal Scientific Industrial (Shanghai) Co., Ltd. (“USISH”), have been listed on the Shanghai Stock Exchange (the “SSE”) under the symbol “601231” since February 2012.

The consolidated financial statements are presented in the Company’s functional currency, New Taiwan dollar (NT\$).

### 2. APPROVAL OF FINANCIAL STATEMENTS

The consolidated financial statements were approved for issue by the Company’s board of directors on February 26, 2019.

### 3. APPLICATION OF NEW, AMENDED AND REVISED STANDARDS, AND INTERPRETATIONS

- a. Initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) (collectively, the “IFRSs”) endorsed and issued into effect by the Financial Supervisory Commission (FSC)

Except for the following, whenever applied, the initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed and issued into effect by the FSC would not have any material impact on the Group’s accounting policies:

#### 1) IFRS 9 “Financial Instruments” and related amendments

IFRS 9 supersedes IAS 39 “Financial Instruments: Recognition and Measurement”, with consequential amendments to IFRS 7 “Financial Instruments: Disclosures” and other standards. IFRS 9 sets out the requirements for classification, measurement and impairment of financial assets and hedge accounting. Refer to Note 4 for information relating to the relevant accounting policies.

The requirements for classification, measurement and impairment of financial assets have been applied retrospectively from January 1, 2018, and the requirements for hedge accounting have been applied prospectively. IFRS 9 is not applicable to items that have already been derecognized as of December 31, 2017.

#### Classification, measurement and impairment of financial assets

On the basis of the facts and circumstances that existed as of January 1, 2018, the Group has performed an assessment of the classification of recognized financial assets and has elected not to restate prior reporting periods.

The following table shows the original measurement categories and carrying amount under IAS 39 and the new measurement categories and carrying amount under IFRS 9 for each class of the Group’s financial assets and financial liabilities as of January 1, 2018.

| Financial Assets                                                                                        | Measurement Category   |                                                                               | Carrying Amount |                | Remark |
|---------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------|-----------------|----------------|--------|
|                                                                                                         | IAS 39                 | IFRS 9                                                                        | IAS 39<br>NT\$  | IFRS 9<br>NT\$ |        |
| Cash and cash equivalents                                                                               | Loans and receivables  | Amortized cost                                                                | \$ 46,078,066   | \$ 46,078,066  |        |
| Derivatives                                                                                             | Held for trading       | Mandatorily at fair value through profit or loss (“FVTPL”)                    | 121,863         | 121,863        |        |
| Equity instruments                                                                                      | Held for trading       | Mandatorily at FVTPL                                                          | 4,410,732       | 4,410,732      |        |
|                                                                                                         | Available-for-sale     | Mandatorily at FVTPL                                                          | 279,791         | 279,791        | b)     |
|                                                                                                         | Available-for-sale     | Fair value through other comprehensive income (“FVTOCI”) - equity instruments | 908,549         | 908,549        | a)     |
| Open-end mutual funds                                                                                   | Held for trading       | Mandatorily at FVTPL                                                          | 589,976         | 589,976        |        |
|                                                                                                         | Available-for-sale     | Mandatorily at FVTPL                                                          | 23,825          | 23,825         | b)     |
| Debt instruments                                                                                        | Designated as at FVTPL | Mandatorily at FVTPL                                                          | 100,496         | 100,496        |        |
|                                                                                                         | Other financial assets | FVTOCI - debt instruments                                                     | 1,000,000       | 1,080,000      | d)     |
| Time deposits with original maturity of over three months, pledged time deposits and guarantee deposits | Loans and receivables  | Amortized cost                                                                | 405,520         | 405,520        | c)     |
| Trade receivables and other receivables                                                                 | Loans and receivables  | Amortized cost                                                                | 56,252,661      | 56,252,661     |        |

| Financial Assets                                                                            | IAS 39<br>Carrying<br>Amount as of<br>January 1,<br>2018<br>NT\$ | Reclassifi-<br>cations<br>NT\$      | Remea-<br>surements<br>NT\$ | IFRS 9<br>Carrying<br>Amount as of<br>January 1,<br>2018<br>NT\$ | Retained<br>Earnings<br>Effect on<br>January 1,<br>2018<br>NT\$ | Other Equity<br>Effect on<br>January 1,<br>2018<br>NT\$ | Remark |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------|-----------------------------|------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|--------|
| <u>FVTPL</u>                                                                                | \$ 5,223,067                                                     |                                     |                             |                                                                  |                                                                 |                                                         |        |
| Add: Reclassification from<br>available-for-sale (IAS<br>39) - required<br>reclassification | <u>-</u><br><u>5,223,067</u>                                     | <u>\$ 303,616</u><br><u>303,616</u> | <u>\$ -</u><br><u>-</u>     | <u>\$ 5,526,683</u>                                              | <u>\$ 110,648</u><br><u>110,648</u>                             | <u>\$ (110,648)</u><br><u>(110,648)</u>                 | b)     |
| <u>FVTOCI</u>                                                                               |                                                                  |                                     |                             |                                                                  |                                                                 |                                                         |        |
| Debt instruments                                                                            |                                                                  |                                     |                             |                                                                  |                                                                 |                                                         |        |
| Add: Reclassification from<br>other financial assets                                        | -                                                                | 1,000,000                           | 80,000                      |                                                                  | -                                                               | 80,000                                                  | d)     |
| Equity instruments                                                                          |                                                                  |                                     |                             |                                                                  |                                                                 |                                                         |        |
| Add: Reclassification from<br>available-for-sale (IAS<br>39)                                | <u>-</u><br><u>-</u>                                             | <u>908,549</u><br><u>1,908,549</u>  | <u>-</u><br><u>80,000</u>   | <u>1,988,549</u>                                                 | <u>417,398</u><br><u>417,398</u>                                | <u>(417,398)</u><br><u>(337,398)</u>                    | a)     |
| Investments accounted for<br>using the equity method                                        | <u>48,689,265</u>                                                | <u>-</u>                            | <u>(2,586)</u>              | <u>48,686,679</u>                                                | <u>(169,527)</u>                                                | <u>166,941</u>                                          |        |
|                                                                                             | <u>\$53,912,332</u>                                              | <u>\$ 2,212,165</u>                 | <u>\$ 77,414</u>            | <u>\$56,201,911</u>                                              | <u>\$ 358,519</u>                                               | <u>\$ (281,105)</u>                                     |        |

- a) Unquoted shares and limited partnership classified as available-for-sale are designated as at FVTOCI and the changes in fair value accumulated in other equity are transferred directly to retained earnings instead of being reclassified to profit or loss on disposal. Impairment losses previously recognized and accumulated in retained earnings are adjusted by the Group to record an increase in retained earnings and a decrease in other equity, unrealized gains or losses on financial assets at fair value through other comprehensive income, since no subsequent impairment assessment is required under IFRS 9;
- b) Quoted shares classified as available-for-sale are classified as at fair value through profit or loss under IFRS 9. Open-end mutual funds classified as available-for-sale are classified as at fair value through profit or loss under IFRS 9 because the contractual cash flows are not solely payments of principal and interest on the principal outstanding and they are not equity instruments. The Group reclassifies unrealized gains or losses on available-for-sale financial assets in other equity to retained earnings;
- c) Time deposits with original maturity of over three months, pledged time deposits and guarantee deposits are classified as measured at amortized cost under IFRS 9 because, on initial recognition, the contractual cash flows that are solely payments of principal and interest on the principal outstanding and these investments are held within a business model whose objective is to collect the contractual cash flows; and
- d) Debt investments with no active market are classified as at fair value through other comprehensive income under IFRS 9, because, on initial recognition, the contractual cash flows that are solely payments of principal and interest on the principal outstanding and these investments are held within a business model whose objective is achieved both by collecting contractual cash flows and selling financial assets. The Group adjusts those debt investments and other equity, unrealized gains or losses on financial assets at fair value through other comprehensive income, based on their fair value.

## 2) IFRS 15 “Revenue from Contracts with Customers” and related amendment

IFRS 15 establishes principles for recognizing revenue that apply to all contracts with customers,

and supersedes IAS 18 “Revenue”, IAS 11 “Construction Contracts” and a number of revenue-related interpretations. Refer to Note 4 for related accounting policies.

Most of revenues generated from the goods manufactured by the Group’s operating segments in packaging and testing are changed to be recognized over time after the application of IFRS 15. Prior to the application of IFRS 15, the Group recognized revenues when the significant risks and rewards of ownership of inventories have been transferred to customers.

The Group elected only to retrospectively apply IFRS 15 to contracts that were not complete as of January 1, 2018 and recognized the cumulative effect of retrospectively applying IFRS 15 in retained earnings on January 1, 2018.

The impact on assets, liabilities and equity as of January 1, 2018 from the initial application of IFRS 15 is set out below:

|                                                   | IAS 18<br>Carrying<br>Amount as of<br>January 1, 2018<br>NT\$ | Adjustments<br>Arising from<br>Initial Application<br>NT\$ | IFRS 15<br>Carrying<br>Amount as of<br>January 1, 2018<br>NT\$ |
|---------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------|
| Inventories                                       | \$ 24,260,911                                                 | \$ (1,381,778)                                             | \$ 22,879,133                                                  |
| Contract assets - current                         | -                                                             | 1,971,107                                                  | 1,971,107                                                      |
| Investments accounted for using the equity method | 48,689,265                                                    | 40,139                                                     | 48,729,404                                                     |
| Deferred tax assets                               | <u>4,001,821</u>                                              | <u>(7,287)</u>                                             | <u>3,994,534</u>                                               |
| Total effect on assets                            | <u>\$ 76,951,997</u>                                          | <u>\$ 622,181</u>                                          | <u>\$ 77,574,178</u>                                           |
| Current tax liabilities                           | \$ 4,863,549                                                  | \$ 5,078                                                   | \$ 4,868,627                                                   |
| Deferred tax liabilities                          | <u>4,961,487</u>                                              | <u>90,071</u>                                              | <u>5,051,558</u>                                               |
| Total effect on liabilities                       | <u>\$ 9,825,036</u>                                           | <u>\$ 95,149</u>                                           | <u>\$ 9,920,185</u>                                            |
| Retained earnings                                 | \$ 76,406,530                                                 | \$ 521,849                                                 | \$ 76,928,379                                                  |
| Non-controlling interests                         | <u>13,199,937</u>                                             | <u>5,183</u>                                               | <u>13,205,120</u>                                              |
| Total effect on equity                            | <u>\$ 89,606,467</u>                                          | <u>\$ 527,032</u>                                          | <u>\$ 90,133,499</u>                                           |

Had the Group applied IAS 18 in the current year, the following adjustments should have been made to reflect the line items and balances under IFRS 15.

**Impact on assets, liabilities and equity as of December 31, 2018**

|                                                               | NT\$                  |
|---------------------------------------------------------------|-----------------------|
| Increase in inventories                                       | \$ 2,313,269          |
| Decrease in contract assets - current                         | (4,498,500)           |
| Increase in trade receivables                                 | 1,073,368             |
| Decrease in investments accounted for using the equity method | (37,312)              |
| Increase in deferred tax assets                               | <u>26,389</u>         |
| Decrease in assets                                            | <u>\$ (1,122,786)</u> |
|                                                               | (Continued)           |

|                                       | NT\$                               |
|---------------------------------------|------------------------------------|
| Decrease in current tax liabilities   | \$ (47,028)                        |
| Decrease in deferred tax liabilities  | <u>(141,934)</u>                   |
| Decrease in liabilities               | <u>\$ (188,962)</u>                |
| Decrease in retained earnings         | \$ (933,310)                       |
| Decrease in non-controlling interests | <u>(514)</u>                       |
| Decrease in equity                    | <u>\$ (933,824)</u><br>(Concluded) |

**Impact on total comprehensive income for the year ended December 31, 2018**

|                                                                                   | NT\$                |
|-----------------------------------------------------------------------------------|---------------------|
| Decrease in operating revenues                                                    | \$ (475,155)        |
| Decrease in operating costs                                                       | \$ (101,964)        |
| Increase in share of profit of associates and joint ventures                      | <u>\$ 2,828</u>     |
| Decrease in income tax expense                                                    | <u>\$ (81,908)</u>  |
| Decrease in net profit and total comprehensive income for the year                | <u>\$ (406,792)</u> |
| Increase (decrease) in net profit and total comprehensive income attributable to: |                     |
| Owners of the Company                                                             | \$ (411,461)        |
| Non-controlling interests                                                         | <u>4,669</u>        |
|                                                                                   | <u>\$ (406,792)</u> |
| Impact on earnings per share:                                                     |                     |
| Decrease in basic earnings per share                                              | \$ (0.10)           |
| Decrease in diluted earnings per share                                            | <u>\$ (0.10)</u>    |

- b. The Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed by the FSC for application starting from 2019

| New, Amended or Revised Standards and Interpretations<br>("New IFRSs")    | Effective Date<br>Announced by IASB (Note 1) |
|---------------------------------------------------------------------------|----------------------------------------------|
| Annual Improvements to IFRSs 2015-2017 Cycle                              | January 1, 2019                              |
| Amendments to IFRS 9 "Prepayment Features with Negative Compensation"     | January 1, 2019 (Note 2)                     |
| IFRS 16 "Leases"                                                          | January 1, 2019                              |
| Amendments to IAS 19 "Plan Amendment, Curtailment or Settlement "         | January 1, 2019 (Note 3)                     |
| Amendments to IAS 28 "Long-term Interests in Associate and Joint Venture" | January 1, 2019                              |
| IFRIC 23 "Uncertainty over Income Tax Treatments"                         | January 1, 2019                              |

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual periods beginning on or after their respective effective dates.

Note 2: The FSC permits the election for early adoption of the amendments starting from 2018.

Note 3: The Group shall apply these amendments to plan amendments, curtailments or settlements occurring on or after January 1, 2019.

#### 1) IFRS 16 “Leases”

IFRS 16 sets out the accounting standards for leases that will supersede IAS 17, IFRIC 4 and a number of related interpretations.

##### Definition of a lease

Upon initial application of IFRS 16, the Group will elect to apply IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into (or changed) on or after January 1, 2019. Contracts identified as containing a lease under IAS 17 and IFRIC 4 will not be reassessed and will be accounted for in accordance with the transitional provisions under IFRS 16.

Upon initial application of IFRS 16, if the Group is a lessee, it will recognize right-of-use assets, or investment properties if the right-of-use assets meet the definition of investment properties, and lease liabilities for all leases on the consolidated balance sheets except for those whose payments under low-value asset and short-term leases will be recognized as expenses on a straight-line basis. On the consolidated statements of comprehensive income, the Group should present the depreciation expense charged on the right-of-use assets separately from the interest expense accrued on the lease liabilities; interest is computed using the effective interest method. On the consolidated statements of cash flows, cash payments for the principal portion of the lease liabilities will be classified within financing activities; cash payments for the interest portion will be classified within operating activities.

The application of IFRS 16 is not expected to have a material impact on the accounting of the Group as lessor.

The Group anticipates applying IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized on January 1, 2019. Comparative information will not be restated.

The Group expects to apply the following practical expedients:

- a) The Group will apply a single discount rate to a portfolio of leases with reasonably similar characteristics to measure lease liabilities.
- b) The Group will account for those leases for which the lease term ends on or before December 31, 2019 as short-term leases.
- c) The Group will exclude initial direct costs from the measurement of right-of-use assets on January 1, 2019.
- d) The Group will use hindsight, such as in determining lease terms, to measure lease liabilities.

For leases currently classified as finance leases under IAS 17, the carrying amount of right-of-use assets and lease liabilities on January 1, 2019 will be determined as the carrying amount of the leased assets and finance lease payables as of December 31, 2018.

**Anticipated impact on assets, liabilities and equity as of January 1, 2019**

|                                         | IAS 17<br>Carrying<br>Amount as of<br>December 31, 2018<br>NT\$ | Adjustments<br>Arising from<br>Initial Application<br>of IFRS 16<br>NT\$ | IFRS16<br>Carrying<br>Amount as of<br>January 1, 2019<br>NT\$ |
|-----------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------|
| Other financial assets - current        | \$ 6,539,467                                                    | \$ (31)                                                                  | \$ 6,539,436                                                  |
| Other current assets                    | 3,773,384                                                       | (385,014)                                                                | 3,388,370                                                     |
| Long-term prepayments for lease         | 10,764,835                                                      | (10,764,835)                                                             | -                                                             |
| Property, plant and equipment           | 214,592,588                                                     | (277,079)                                                                | 214,315,509                                                   |
| Right-of-use assets                     | -                                                               | 10,724,198                                                               | 10,724,198                                                    |
| Investment properties                   | 7,738,379                                                       | 6,599,225                                                                | 14,337,604                                                    |
| Other financial assets - non-current    | 1,044,294                                                       | (2,747)                                                                  | 1,041,547                                                     |
| Other intangible assets                 | <u>30,897,700</u>                                               | <u>(59,667)</u>                                                          | <u>30,838,033</u>                                             |
| Total effect on assets                  | <u>\$ 275,350,647</u>                                           | <u>\$ 5,834,050</u>                                                      | <u>\$ 281,184,697</u>                                         |
| Obligation under leases - current       | \$ -                                                            | \$ 490,085                                                               | \$ 490,085                                                    |
| Other current liabilities               | 5,984,156                                                       | (17,144)                                                                 | 5,967,012                                                     |
| Obligation under leases - non-current   | -                                                               | 5,598,071                                                                | 5,598,071                                                     |
| Other current liabilities - non-current | <u>1,371,302</u>                                                | <u>(236,962)</u>                                                         | <u>1,134,340</u>                                              |
| Total effect on liabilities             | <u>\$ 7,355,458</u>                                             | <u>\$ 5,834,050</u>                                                      | <u>\$ 13,189,508</u>                                          |

2) Amendments to IAS 19 “Plan Amendment, Curtailment or Settlement”

The amendments stipulate that, if a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the remainder of the annual reporting period are determined using the actuarial assumptions used for the remeasurement of the net defined benefit liabilities (assets). In addition, the amendments clarify the effect of a plan amendment, curtailment or settlement on the requirements regarding the asset ceiling. The Group will apply the above amendments prospectively.

As of the date the consolidated financial statements were authorized for issue by the board of directors, the Group assessed that the application of the aforementioned amendments and other related amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed and issued into effect by the FSC will not have material impact on the Group’s financial position and financial performance.

c. New IFRSs in issue but not yet endorsed and issued into effect by the FSC

| <u>New IFRSs</u>                                                                                                         | <u>Effective Date<br/>Announced by IASB (Note 1)</u> |
|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Amendments to IFRS 3 “Definition of a Business”                                                                          | January 1, 2020 (Note 2)                             |
| Amendments to IFRS 10 and IAS 28 “Sale or Contribution of Assets between An Investor and Its Associate or Joint Venture” | To be determined by IASB                             |
| Amendments to IAS 1 and IAS 8 “Definition of Material”                                                                   | January 1, 2020 (Note 3)                             |

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual periods beginning on or after their respective effective dates.

Note 2: The Group shall apply these amendments to business combinations for which the acquisition date is on or after the beginning of the first annual period beginning on or after January 1, 2020 and to asset acquisitions that occur on or after the beginning of that period.



Note 3: The Group shall apply these amendments prospectively for annual periods beginning on or after January 1, 2020.

As of the date the consolidated financial statements were authorized for issue by the board of directors, the Group is continuously assessing the possible impact that the application of other standards and interpretations will have on the Group's financial position and financial performance, and will disclose the relevant impact when the assessment is completed.

#### **4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

a. Statement of compliance

The consolidated financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and IFRSs as endorsed by the FSC.

b. Basis of preparation

As disclosed in Note 1, the share exchange between the Company and ASE was an organization restructure under common control that the Company was essentially the continuation of ASE. The related assets and liabilities in the Company's consolidated financial statements, before the date of incorporation, were recognized based on the carrying amounts of those in ASE's consolidated financial statements. The consolidated financial statements of the Company for prior periods are prepared under the assumption that the Company owned 100% shareholdings of ASE at the very beginning.

The consolidated financial statements have been prepared on the historical cost basis except for financial instruments which are measured at fair value and net defined benefit liabilities which are measured at the present value of the defined benefit obligation less the fair value of plan assets.

The fair value measurements, which are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and based on the significance of the inputs to the fair value measurement in its entirety, are described as follows:

- 1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
- 2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or a liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- 3) Level 3 inputs are unobservable inputs for an asset or a liability.

c. Classification of current and non-current assets and liabilities

Current assets include cash and cash equivalents and those assets held primarily for trading purposes or expected to be realized within twelve months after the balance sheet date, unless the asset is to be used for an exchange or to settle a liability, or otherwise remains restricted, at more than twelve months after the balance sheet date. Current liabilities are obligations incurred for trading purposes or to be settled within twelve months after the balance sheet date (even if an agreement to refinance, or to reschedule payments, on a long-term basis is completed after the balance sheet date and before the consolidated financial statements are authorized for issue) and liabilities that do not have an unconditional right to defer settlement for at least 12 months after the balance sheet date (terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification). Assets and liabilities that are not classified as current are classified as non-current.

The Group engages in the construction business which has an operating cycle of over one year. The normal operating cycle applies when considering the classification of the Group's construction-related

assets and liabilities.

d. Basis of consolidation

1) Principles for preparing consolidated financial statements

The consolidated financial statements incorporate the financial statements of the Company and the entities controlled by the Company (i.e. its subsidiaries, including structured entities).

Income and expenses of subsidiaries acquired or disposed of during the period are included in the consolidated statement of profit or loss and other comprehensive income from the effective dates of acquisitions up to the effective dates of disposals, as appropriate.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the Company.

All intra-group transactions, balances, income and expenses are eliminated in full upon consolidation. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the interests of the Group and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owners of the Company.

When the Group loses control of a subsidiary, a gain or loss is recognized in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and any investment retained in the former subsidiary at its fair value at the date when control is lost and (ii) the assets (including any goodwill) and liabilities and any non-controlling interests of the former subsidiary at their carrying amounts at the date when control is lost. The Group accounts for all amounts recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required had the Group directly disposed of the related assets or liabilities.

The Company became the ultimate parent company of the Group after completing share exchange with ASE on April 30, 2018. In addition, the Company obtained control over SPIL on April 30, 2018, and therefore included SPIL and its subsidiaries in the Group's consolidated financial statements on the same date.

2) Subsidiaries included in consolidated financial statements were as follows:

| Name of Investee                      | Main Businesses                                                | Establishment and Operating Location | Percentage of Ownership (%) |                  |
|---------------------------------------|----------------------------------------------------------------|--------------------------------------|-----------------------------|------------------|
|                                       |                                                                |                                      | December 31 2018            | December 31 2017 |
| ASE                                   | Engaged in the packaging and testing of semiconductors and EMS | Kaohsiung, R.O.C.                    | 100.0                       | 100.0            |
| A.S.E. Holding Limited                | Holding company                                                | Bermuda                              | 100.0                       | 100.0            |
| J & R Holding Limited ("J&R Holding") | Holding company                                                | Bermuda                              | 100.0                       | 100.0            |
| Innosource Limited                    | Holding company                                                | British Virgin Islands               | 100.0                       | 100.0            |

(Continued)

| Name of Investee                                | Main Businesses                                                            | Establishment and Operating Location | Percentage of Ownership (%) |                  |
|-------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------|-----------------------------|------------------|
|                                                 |                                                                            |                                      | December 31 2018            | December 31 2017 |
| Omniquiest Industrial Limited                   | Holding company                                                            | British Virgin Islands               | 100.0                       | 100.0            |
| ASE Marketing & Service Japan Co., Ltd.         | Engaged in marketing and sales services                                    | Japan                                | 100.0                       | 100.0            |
| ASE Test, Inc.                                  | Engaged in the testing of semiconductors                                   | Kaohsiung, R.O.C.                    | 100.0                       | 100.0            |
| Luchu Development Corporation                   | Engaged in the development of real estate properties                       | Taipei, R.O.C.                       | 86.1                        | 86.1             |
| TLJ Intertech Inc.                              | Engaged in information software services                                   | Taipei, R.O.C.                       | 60.0                        | 60.0             |
| MingFung Information Service Corp., Ltd.        | Engaged in information software services, and was established in May 2018. | Taipei, R.O.C.                       | 100.0                       | -                |
| Alto Enterprises Limited                        | Holding company                                                            | British Virgin Islands               | 100.0                       | 100.0            |
| Super Zone Holdings Limited                     | Holding company                                                            | Hong Kong                            | 100.0                       | 100.0            |
| ASE (Kun Shan) Inc.                             | Engaged in the packaging and testing of semiconductors                     | Kun Shan, China                      | 100.0                       | 100.0            |
| ASE Investment (Kun Shan) Limited               | Holding company                                                            | Kun Shan, China                      | 100.0                       | 100.0            |
| Advanced Semiconductor Engineering (China) Ltd. | Will engage in the packaging and testing of semiconductors                 | Shanghai, China                      | 100.0                       | 100.0            |
| ASE Investment (Labuan) Inc.                    | Holding company                                                            | Malaysia                             | 100.0                       | 100.0            |
| ASE Test Limited (“ASE Test”)                   | Holding company                                                            | Singapore                            | 100.0                       | 100.0            |
| ASE (Korea) Inc. (“ASE Korea”)                  | Engaged in the packaging and testing of semiconductors                     | Korea                                | 100.0                       | 100.0            |
| J&R Industrial Inc.                             | Engaged in leasing equipment and investing activity                        | Kaohsiung, R.O.C.                    | 100.0                       | 100.0            |
| ASE Japan Co., Ltd. (“ASE Japan”)               | Engaged in the packaging and testing of semiconductors                     | Japan                                | 100.0                       | 100.0            |
| ASE (U.S.) Inc.                                 | After-sales service and sales support                                      | U.S.A.                               | 100.0                       | 100.0            |
| Global Advanced Packaging Technology Limited    | Holding company                                                            | British Cayman Islands               | 100.0                       | 100.0            |
| ASE WeiHai Inc.                                 | Engaged in the packaging and testing of semiconductors                     | Shandong, China                      | 100.0                       | 100.0            |
| Suzhou ASEN Semiconductors Co., Ltd. (“ASEN”)   | Engaged in the packaging and testing of semiconductors                     | Suzhou, China                        | 70.0                        | 60.0             |
| Anstock Limited                                 | Engaged in financing activity                                              | British Cayman Islands               | 100.0                       | 100.0            |
| Anstock II Limited                              | Engaged in financing activity                                              | British Cayman Islands               | 100.0                       | 100.0            |

(Continued)

| Name of Investee                                    | Main Businesses                                                                | Establishment and Operating Location | Percentage of Ownership (%) |       |
|-----------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------|-----------------------------|-------|
|                                                     |                                                                                |                                      | December 31 2018            | 2017  |
| ASE (Shanghai) Inc.                                 | Engaged in the production of substrates                                        | Shanghai, China                      | 100.0                       | 100.0 |
| ASE Corporation                                     | Holding company                                                                | British Cayman Islands               | 100.0                       | 100.0 |
| ASE Mauritius Inc.                                  | Holding company                                                                | Mauritius                            | 100.0                       | 100.0 |
| ASE Labuan Inc.                                     | Holding company                                                                | Malaysia                             | 100.0                       | 100.0 |
| Shanghai Ding Hui Real Estate Development Co., Ltd. | Engaged in the development, construction and sale of real estate properties    | Shanghai, China                      | 100.0                       | 100.0 |
| Shanghai Ding Qi Property Management Co., Ltd.      | Engaged in the management of real estate properties                            | Shanghai, China                      | 100.0                       | 100.0 |
| Advanced Semiconductor Engineering (HK) Limited     | Engaged in the trading of substrates                                           | Hong Kong                            | 100.0                       | 100.0 |
| Shanghai Ding Wei Real Estate Development Co., Ltd. | Engaged in the development, construction and leasing of real estate properties | Shanghai, China                      | 100.0                       | 100.0 |
| Shanghai Ding Yu Real Estate Development Co., Ltd.  | Engaged in the development, construction and leasing of real estate properties | Shanghai, China                      | 100.0                       | 100.0 |
| Shanghai Ding Fan Department Store Co., Ltd.        | Engaged in department store business                                           | Shanghai, China                      | 100.0                       | 100.0 |
| Kun Shan Ding Hong Real Estate Development Co., Ltd | Engaged in the development, construction and leasing of real estate properties | Kun Shan, China                      | 100.0                       | 100.0 |
| Shanghai Ding Xu Property Management Co., Ltd.      | Engaged in the management of real estate properties                            | Shanghai, China                      | 100.0                       | 100.0 |
| ASE Electronics Inc.                                | Engaged in the production of substrates                                        | Kaohsiung, R.O.C.                    | 100.0                       | 100.0 |
| ASE Test Holdings, Ltd.                             | Holding company                                                                | British Cayman Islands               | 100.0                       | 100.0 |
| ASE Holdings (Singapore) Pte Ltd                    | Holding company                                                                | Singapore                            | 100.0                       | 100.0 |
| ASE Singapore Pte. Ltd.                             | Engaged in the packaging and testing of semiconductors                         | Singapore                            | 100.0                       | 100.0 |
| ISE Labs, Inc.                                      | Engaged in the testing of semiconductors                                       | U.S.A.                               | 100.0                       | 100.0 |
| ASE Electronics (M) Sdn. Bhd.                       | Engaged in the packaging and testing of semiconductors                         | Malaysia                             | 100.0                       | 100.0 |
| ASE Assembly & Test (Shanghai) Limited              | Engaged in the packaging and testing of semiconductors                         | Shanghai, China                      | 100.0                       | 100.0 |
| ASE Trading (Shanghai) Ltd.                         | Liquidated in December 2018                                                    | Shanghai, China                      | -                           | 100.0 |

(Continued)

| Name of Investee                                               | Main Businesses                                                                                                                                | Establishment and Operating Location | Percentage of Ownership (%) |       |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------|-------|
|                                                                |                                                                                                                                                |                                      | December 31 2018            | 2017  |
| ISE Labs, China, Ltd.                                          | Engaged in the testing of semiconductors, and was established in October 2018                                                                  | Shanghai, China                      | 100.0                       | -     |
| Wuxi Tongzhi Microelectronics Co., Ltd.                        | Engaged in the packaging and testing of semiconductors                                                                                         | Wuxi, China                          | 100.0                       | 100.0 |
| USI Global                                                     | Engaged in investing activities, and was established in November 2018 and then dissolved in January 2019                                       | Nantou, R.O.C.                       | 100.0                       | -     |
| USIINC                                                         | Engaged in investing activities                                                                                                                | Nantou, R.O.C.                       | 100.0                       | 99.2  |
| Huntington Holdings International Co., Ltd.                    | Holding company                                                                                                                                | British Virgin Islands               | 100.0                       | 99.2  |
| Unitech Holdings International Co., Ltd. (“UHI”)               | Holding company                                                                                                                                | British Virgin Islands               | 100.0                       | 99.2  |
| Real Tech Holdings Limited                                     | Holding company                                                                                                                                | British Virgin Islands               | 100.0                       | 99.2  |
| Universal ABIT Holding Co., Ltd.                               | In the process of liquidation                                                                                                                  | British Cayman Islands               | 100.0                       | 99.2  |
| Rising Capital Investment Limited                              | Holding company                                                                                                                                | British Virgin Islands               | 100.0                       | 99.2  |
| Rise Accord Limited                                            | Holding company                                                                                                                                | British Virgin Islands               | 100.0                       | 99.2  |
| Universal Scientific Industrial (Kunshan) Co., Ltd.            | Engaged in the manufacturing and sale of computer assistance system and related peripherals                                                    | Kun Shan, China                      | 100.0                       | 99.2  |
| USI Enterprise Limited (“USIE”)                                | Engaged in the service of investment advisory and warehousing management                                                                       | Hong Kong                            | 95.4                        | 96.9  |
| Universal Scientific Industrial (Shanghai) Co., Ltd. (“USISH”) | Engaged in the designing, manufacturing and sale of electronic components                                                                      | Shanghai, China                      | 74.6                        | 75.8  |
| Universal Global Technology Co., Limited                       | Holding company                                                                                                                                | Hong Kong                            | 74.6                        | 75.8  |
| Universal Global Technology (Kunshan) Co., Ltd.                | Engaged in the designing and manufacturing of electronic components                                                                            | Kun Shan, China                      | 74.6                        | 75.8  |
| Universal Global Technology (Shanghai) Co., Ltd.               | Engaged in the processing and sales of computer and communication peripherals as well as business in import and export of goods and technology | Shanghai, China                      | 74.6                        | 75.8  |

(Continued)

| Name of Investee                                          | Main Businesses                                                                                                                                               | Establishment and Operating Location | Percentage of Ownership (%) |                  |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------|------------------|
|                                                           |                                                                                                                                                               |                                      | December 31 2018            | December 31 2017 |
| Universal Global Electronics (Shanghai) Co., Ltd.         | Engaged in the sale of electronic components and telecommunications equipment                                                                                 | Shanghai, China                      | 74.6                        | 75.8             |
| Universal Global Industrial Co., Limited                  | Engaged in manufacturing, trading and investing activity                                                                                                      | Hong Kong                            | 74.6                        | 75.8             |
| Universal Global Scientific Industrial Co., Ltd. (“UGTW”) | Engaged in the manufacturing of components of telecomm and cars and provision of related R&D services                                                         | Nantou, R.O.C.                       | 74.6                        | 75.8             |
| USI America Inc.                                          | Engaged in the manufacturing and processing of motherboards and wireless network communication and provision of related technical service                     | U.S.A.                               | 74.6                        | 75.8             |
| Universal Scientific Industrial De Mexico S.A. De C.V.    | Engaged in the assembling of motherboards and computer components                                                                                             | Mexico                               | 74.6                        | 75.8             |
| USI Japan Co., Ltd.                                       | Engaged in the manufacturing and sale of computer peripherals, integrated chip and other related accessories                                                  | Japan                                | 74.6                        | 75.8             |
| USI Electronics (Shenzhen) Co., Ltd.                      | Engaged in the design, manufacturing and sale of motherboards and computer peripherals                                                                        | Shenzhen, China                      | 74.6                        | 75.8             |
| Universal Global Electronics Co., Ltd.                    | Engaged in accepting and outsourcing orders as well as sales of electronic components and service of technical advisory, and was established in February 2018 | Hong Kong                            | 74.6                        | -                |
| Universal Scientific Industrial Co., Ltd. (“USI”)         | Engaged in the manufacturing, processing and sale of computers, computer peripherals and related accessories                                                  | Nantou, R.O.C.                       | 74.4                        | 75.5             |
| SPIL                                                      | Engaged in the assembly, testing and turnkey services of integrated circuits                                                                                  | Taichung, R.O.C.                     | 100.0                       | -                |
| SPIL (B.V.I.) Holding Limited                             | Engaged in investing activities                                                                                                                               | British Virgin Islands               | 100.0                       | -                |

(Continued)

| Name of Investee                              | Main Businesses                                        | Establishment and Operating Location | Percentage of Ownership (%) |                  |
|-----------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------|------------------|
|                                               |                                                        |                                      | December 31 2018            | December 31 2017 |
| Siliconware Investment Co., Ltd.              | Engaged in investing activities                        | Taipei, R.O.C.                       | 100.0                       | -                |
| Siliconware USA, Inc. ("SUI")                 | Engaged in marketing activities                        | U.S.A.                               | 100.0                       | -                |
| SPIL (Cayman) Holding Limited                 | Engaged in investing activities                        | British Cayman Islands               | 100.0                       | -                |
| Siliconware Technology (Suzhou) Limited       | Engaged in the packaging and testing of semiconductors | Suzhou, China                        | 70.0                        | -                |
| Siliconware Electronics (Fujian) Co., Limited | Engaged in the packaging and testing of semiconductors | Fujian, China                        | 100.0                       | -                |

(Concluded)

e. Business combinations

Acquisitions of businesses are accounted for using the acquisition method. Acquisition-related costs are generally recognized in profit or loss as they are incurred.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after re-assessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognized immediately in profit or loss as a bargain purchase gain.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognized in profit or loss or other comprehensive income. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are recognized on the same basis as would be required if that interest were directly disposed of by the Group.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted retrospectively during the measurement period, or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

Business combination involving entities under common control is not accounted for by acquisition method but accounted for at the carrying amounts of the entities. The Group elected not to restate prior period comparative information in the financial statements as the business combination was an organization restructure under common control.

f. Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the entity's functional currency (i.e. foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions.

At each balance sheet date, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Exchange differences on monetary items arising from settlement or translation are recognized in profit or loss in the period in which they arise except for exchange differences on transactions entered into in order to hedge certain foreign currency risks.

Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising from the retranslation of non-monetary items are included in profit or loss for the period except for exchange differences arising from the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which cases, the exchange differences are also recognized directly in other comprehensive income.

Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rate at the date of the transaction, and are not retranslated.

For the purposes of presenting the consolidated financial statements, the assets and liabilities of the Group's foreign operations (including subsidiaries, associates and joint ventures in other countries that use currencies which are different from the currency of the Company) are translated into the New Taiwan dollars using exchange rates prevailing at each balance sheet date. Income and expense items are translated at the average exchange rates for the period. The resulting currency translation differences are recognized in other comprehensive income and accumulated in equity attributed to the owners of the Company and non-controlling interests as appropriate.

On the disposal of the Group's entire interest in a foreign operation, or a disposal involving the loss of control over a subsidiary that includes a foreign operation, or a partial disposal of an interest in a joint arrangement or an associate that includes a foreign operation of which the retained interest becomes a financial asset, all of the exchange differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

In relation to a partial disposal of a subsidiary that does not result in the Group losing control over the subsidiary, the proportionate share of accumulated exchange differences is re-attributed to the non-controlling interests of the subsidiary and is not recognized in profit or loss. For all other partial disposals, the proportionate share of the accumulated exchange differences recognized in other comprehensive income is reclassified to profit or loss.

g. Inventories and inventories related to real estate business

Inventories, including raw materials (materials received from customers for processing, mainly semiconductor wafers, are excluded from inventories as title and risk of loss remain with the customers), supplies, work in process, finished goods, and materials and supplies in transit are stated at the lower of cost or net realizable value. Inventory write-downs are made by item, except for those that may be appropriate to group items of similar or related inventories. Net realizable value is the estimated selling prices of inventories less all estimated costs of completion and estimated costs necessary to make the sale. Raw materials and supplies are recorded at moving average cost while work in process and finished goods are recorded at standard cost.

Inventories related to real estate business include land and buildings held for sale, land held for construction and construction in progress. Land held for development is recorded as land held for construction upon obtaining the title of ownership. Prior to the completion, the borrowing costs directly attributable to construction in progress are capitalized as part of the cost of the asset. Construction in progress is transferred to land and buildings held for sale upon completion. Land and buildings held for sale, construction in progress and land held for construction are stated at the lower of cost or net realizable value and related write-downs are made by item. The amounts received in advance for real estate properties are first recorded as advance receipts and then recognized as revenue when the construction is completed and the title and significant risk of the real estate properties are transferred to customers. Cost of sales of land and buildings held for sale are recognized based on the ratio of property



sold to the total property developed.

h. Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor an interest in a joint venture. Joint venture is a joint arrangement whereby the Group and other parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Under the equity method, investments in an associate and a joint venture are initially recognized at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associate and joint venture. The Group also recognizes the changes in the Group's share of equity of associates and joint venture.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets and liabilities of an associate or a joint venture at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of acquisition after assessment is recognized immediately in profit or loss.

When the Group subscribes for additional new shares of an associate and joint venture at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Group's proportionate interest in the associate and joint venture. The Group records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus - changes in capital surplus from investments in associates and joint ventures accounted for using the equity method. If the Group's ownership interest is reduced due to its additional subscription of the new shares of the associate and joint venture, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate and joint venture is reclassified to profit or loss on the same basis as would be required had the investee directly disposed of the related assets or liabilities. When the adjustment should be debited to capital surplus, but the capital surplus recognized from investments accounted for using the equity method is insufficient, the shortage is debited to retained earnings.

When the Group's share of losses of an associate and a joint venture equals or exceeds its interest in that associate and joint venture (which includes any carrying amount of the investment accounted for using the equity method and long-term interests that, in substance, form part of the Group's net investment in the associate and joint venture), the Group discontinues recognizing its share of further losses. Additional losses and liabilities are recognized only to the extent that the Group has incurred legal obligations or constructive obligations, or made payments on behalf of that associate and joint venture.

The entire carrying amount of an investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount with its carrying amount. Any impairment loss recognized is not allocated to any asset, including goodwill, that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Group discontinues the use of the equity method from the date on which its investment ceases to be an associate and a joint venture. Any retained investment is measured at fair value at that date, and the fair value is regarded as the investment's fair value on initial recognition as a financial asset. The difference between the previous carrying amount of the associate and the joint venture attributable to the retained interest and its fair value is included in the determination of the gain or loss on disposal of the associate and the joint venture. The Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate and joint venture on the same basis as would be required had that associate directly disposed of the related assets or liabilities. If an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate, the Group continues to apply the equity method and does not remeasure the

retained interest.

When a group entity transacts with its associate and joint venture, profits and losses resulting from the transactions with the associate and joint venture are recognized in the Group's consolidated financial statements only to the extent that interests in the associate and the joint venture are not related to the Group.

i. Property, plant and equipment

Except for land which is stated at cost, property, plant and equipment (including assets held under finance leases) are stated at cost less accumulated depreciation and accumulated impairment.

Properties in the course of construction are carried at cost, less any recognized impairment loss. Cost includes professional fees and borrowing costs eligible for capitalization. Such assets are depreciated and classified to the appropriate categories of property, plant and equipment when completed and ready for their intended use.

Freehold land is not depreciated.

Depreciation of property, plant and equipment is recognized using the straight-line method. Each significant part is depreciated separately. If the lease term is shorter than the assets' useful lives, such assets are depreciated over the lease term. The estimated useful lives, residual values and depreciation method are reviewed at each balance sheet date, with the effect of any changes in estimate accounted for on a prospective basis.

On derecognition of an item of property, plant and equipment, the difference between the sales proceeds and the carrying amount of the asset is recognized in profit or loss.

j. Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation (including property under construction for such purposes). Investment properties also include land held for a currently undetermined future use.

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are measured at cost less accumulated depreciation and accumulated impairment loss. Depreciation is recognized using the straight-line method.

Investment properties under construction are stated at cost less accumulated depreciation and accumulated impairment loss. Cost includes professional fees and borrowing costs eligible for capitalization. Depreciation of these assets commences when the assets are ready for their intended use.

For a transfer from property, plant and equipment to investment properties, the property's deemed cost for subsequent accounting is its carrying amount at the end of owner-occupation.

For a transfer from inventories to investment properties, the property's deemed cost for subsequent accounting is its carrying amount at inception of an operating lease.

On derecognition of an investment property, the difference between the net disposal proceeds and the carrying amount of the asset is included in profit or loss.

k. Goodwill

Goodwill arising from an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment loss.

For the purposes of impairment testing, goodwill is allocated to each of the Group's cash-generating units or groups of cash-generating units (referred to as "cash-generating units") that is expected to benefit from the synergies of the combination.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired, by comparing its carrying amount, including the attributed goodwill, with its recoverable amount. However, if the goodwill allocated to a cash-generating unit was acquired in a business combination during the current annual period, that unit shall be tested for impairment before the end of the current annual period. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then pro rata to the other assets of the unit based on the carrying amount of each asset in the unit. Any impairment loss is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

l. Other intangible assets

Other intangible assets with finite useful lives acquired separately are initially measured at cost and subsequently measured at cost less accumulated amortization and accumulated impairment loss. Other intangible assets are amortized using the straight-line method over their estimated useful lives. The estimated useful lives, residual values, and amortization methods are reviewed at each balance sheet date, with the effect of any changes in estimate being accounted for on a prospective basis.

Other intangible assets acquired in a business combination and recognized separately from goodwill are initially recognized at their fair value at the acquisition date which is regarded as their cost. Subsequent to initial recognition, they are measured on the same basis as intangible assets that are acquired separately.

On derecognition of an intangible asset, the difference between the net disposal proceeds and the carrying amount of the asset are recognized in profit or loss.

m. Impairment of tangible and intangible assets other than goodwill

At each balance sheet date, the Group reviews the carrying amounts of its tangible and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Corporate assets are allocated to the individual cash-generating units on a reasonable and consistent basis of allocation. The recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount, with the resulting impairment loss recognized in profit or loss.

When an impairment loss is subsequently reversed, the carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, but only to the extent of the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

n. Financial instruments

Financial assets and financial liabilities are recognized when a group entity becomes a party to the contractual provisions of the instruments.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

#### 1) Financial assets

All regular way purchases or sales of financial assets are recognized and derecognized on a settlement date basis.

##### a) Measurement category

#### 2018

Financial assets held by the Group are classified into the following categories: financial assets at FVTPL, financial assets at amortized cost, and investments in debt instruments and equity instruments at FVTOCI.

##### i. Financial asset at FVTPL

Financial asset is classified as at FVTPL when the financial asset is mandatorily classified or it is designated as at FVTPL. The Group's financial assets mandatorily classified as at FVTPL include investments in equity instruments which are not designated as at FVTOCI and debt instruments that do not meet the amortized cost criteria or the FVTOCI criteria.

A financial asset may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise.

Financial assets at FVTPL are subsequently measured at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any dividend or interest earned on the financial asset.

Fair value is determined in the manner described in Note 36.

##### ii. Financial assets at amortized cost

Financial assets that meet the following conditions are subsequently measured at amortized cost:

- i) The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- ii) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Subsequent to initial recognition, financial assets at amortized cost, including cash and cash equivalents, trade receivables at amortized cost, other receivables and other financial assets, are measured at amortized cost, which equals to gross carrying amount determined using the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for:

- i) Purchased or originated credit-impaired financial assets, for which interest income is calculated by applying the credit-adjusted effective interest rate to the amortized cost of the financial asset; and
- ii) Financial assets that are not credit-impaired on purchase or origination but have subsequently become credit-impaired, for which interest income is calculated by applying the effective interest rate to the amortized cost of such financial assets in subsequent reporting periods.

Cash equivalents include time deposits with original maturities within 3 months from the date of acquisition, which are highly liquid, readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. These cash equivalents are held for the purpose of meeting short-term cash commitments.

### iii. Investments in debt instruments at FVTOCI

For the Group's debt instruments that meet the following conditions are subsequently measured at FVTOCI:

- i) the debt instrument is held within a business model whose objective is achieved by both the collecting of contractual cash flows and the selling of the financial assets; and
- ii) the contractual terms of the debt instrument give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Investments in debt instruments at FVTOCI are subsequently measured at fair value. Changes in the carrying amounts of these debt instruments relating to changes in foreign currency exchange rates, interest income calculated using the effective interest method and impairment losses or reversals are recognized in profit or loss. Other changes in the carrying amount of these debt instruments are recognized in other comprehensive income and will be reclassified to profit or loss when the investment is disposed of.

### iv. Investments in equity instruments at FVTOCI

On initial recognition, the Group make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in other equity. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, instead, they will be transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss when the Group's right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment.

## 2017

The classification of financial assets held by ASE and its subsidiaries includes financial assets at FVTPL, available-for-sale financial assets, and loans and receivables.

i. Financial assets at FVTPL

Financial assets are classified as at FVTPL when the financial assets are either held for trading or they are designated as at FVTPL.

A financial asset other than a financial asset held for trading may be designated as at FVTPL upon initial recognition if:

- i) Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- ii) The financial asset forms part of a group of financial assets or financial liabilities or both, which is managed and has performance evaluated on a fair value basis in accordance with ASE and its subsidiaries' documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- iii) The contract contains one or more embedded derivatives so that the entire hybrid (combined) contract can be designated as at FVTPL.

Financial assets at FVTPL are stated at fair value with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any dividend or interest earned on the financial asset.

Fair value is determined in the manner described in Note 36.

ii. Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated as available-for-sale or are not classified as (1) loans and receivables, (2) held-to-maturity investments or (3) financial assets at fair value through profit or loss.

Available-for-sale financial assets are stated at fair value at each balance sheet date. Changes in the carrying amount of available-for-sale monetary financial assets relating to changes in foreign currency rates, interest income calculated using the effective interest method and dividends on available-for-sale equity investments are recognized in profit or loss. Other changes in the carrying amount of available-for-sale financial assets are recognized in other comprehensive income and accumulated under the heading of unrealized gain (loss) on available-for-sale financial assets. When the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously accumulated in the unrealized gain (loss) on available-for-sale financial assets is reclassified to profit or loss.

Dividends on available-for-sale equity instruments are recognized in profit or loss when ASE and its subsidiaries's right to receive the dividends is established.

iii. Loans and receivables

Loans and receivables including cash and cash equivalents, trade receivables, other receivables and other financial assets are measured at amortized cost using the effective interest method, less any impairment. Interest income is recognized by applying the effective interest rate, except for short-term receivables when the effect of discounting is immaterial.

Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

b) Impairment of financial assets and contract assets

2018

At each balance sheet date, the Group recognizes a loss allowance for expected credit losses on financial assets at amortized cost (including trade receivables), investments in debt instruments that are measured at FVTOCI as well as contract assets.

The Group always recognizes lifetime Expected Credit Loss (“ECL”) for trade receivables and contract assets. For all other financial instruments, the Group recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECL.

Expected credit losses reflect the weighted average of credit losses with the respective risks of a default occurring as the weights. Lifetime ECL represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

The Group recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt instruments that are measured at FVTOCI, for which the loss allowance is recognized in other comprehensive income and does not reduce the carrying amount of the financial asset.

2017

Financial assets, other than those at FVTPL, are assessed for indicators of impairment at each balance sheet date. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial assets, the estimated future cash flows of the investments have been affected.

For financial assets carried at amortized cost, such as trade receivables and other receivables, assets that are assessed not to be impaired individually are, further, assessed for impairment on a collective basis. ASE and its subsidiaries assess the collectability of receivables based on their past experience of collecting payments and observable changes that correlate with default on receivables.

For financial assets carried at amortized cost, the amount of the impairment loss recognized is the difference between the assets’ carrying amounts and the present value of estimated future cash flows, discounted at the financial assets’ original effective interest rates. If, in a subsequent period, the amount of the impairment loss decreases and the decreases can be objectively related to an event occurring after the impairment loss recognized, the previously recognized impairment loss is reversed either directly or by adjusting an allowance account through profit or loss. The reversal shall not result in carrying amounts of financial assets that exceed what the amortized cost would have been at the date the impairment is reversed.

For any available-for-sale equity investments, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment. When an available-for-sale financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the period.

In respect of available-for-sale equity securities, impairment loss previously recognized in profit or loss is not reversed through profit or loss. Any increase in fair value subsequent to impairment is recognized in other comprehensive income. In respect of available-for-sale debt securities, impairment loss is subsequently reversed through profit or loss if an increase in the fair value of the investment can be objectively related to an event occurring after the recognition of the impairment loss.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade and other receivables where the carrying amount is reduced through the use of an allowance account. When trade and other receivables are considered uncollectible, they are written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss except for uncollectible trade receivables and other receivables that are written off against the allowance account.

#### c) Derecognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity.

Before 2018, on derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss which had been recognized in other comprehensive income is recognized in profit or loss. Starting from 2018, on derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. On derecognition of an investment in a debt instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss which had been recognized in other comprehensive income is recognized in profit or loss. However, on derecognition of an investment in an equity instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss, and the cumulative gain or loss which had been recognized in other comprehensive income is transferred directly to retained earnings, without recycling through profit or loss.

## 2) Equity instruments

Debt and equity instruments issued by a group entity are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments issued by a group entity are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Company's own equity instruments is recognized in and deducted directly from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.



### 3) Financial liabilities

Financial liabilities are measured either at amortized cost using the effective interest method or at FVTPL. Financial liabilities measured at FVTPL are held for trading.

Financial liabilities held for trading are stated at fair value, with any gain or loss arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any interest or dividend paid on the financial liability. Fair value is determined in the manner described in Note 36.

The Group derecognizes financial liabilities only when the Group's obligations are discharged, cancelled or expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss.

### 4) Derivative financial instruments

The Group enters into a variety of derivative financial instruments to manage its exposure to interest rate and foreign exchange rate risks, including forward exchange contracts, swap contracts, interest rate swap contracts and foreign currency option contracts.

Derivatives are initially recognized at fair value at the date on which the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately unless the derivative is designated and effective as a hedging instrument; in which event, the timing of the recognition in profit or loss depends on the nature of the hedging relationship. When the fair value of a derivative financial instrument is positive, the derivative is recognized as a financial asset; when the fair value of a derivative financial instrument is negative, the derivative is recognized as a financial liability.

Before 2018, derivatives embedded in non-derivative host contracts were treated as separate derivatives when they met the definition of a derivative; their risks and characteristics were not closely related to those of the host contracts; and the contracts were not measured at FVTPL. Starting from 2018, derivatives embedded in hybrid contracts that contain financial asset hosts that is within the scope of IFRS 9 are not separated; instead, the classification is determined in accordance with the entire hybrid contract. Derivatives embedded in non-derivative host contracts that are not financial assets that is within the scope of IFRS 9 (e.g. financial liabilities) are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

### 5) Convertible bonds

#### a) Convertible bonds contain conversion option classified as an equity

The component parts of compound instruments (convertible bonds) issued by the Group are classified separately as financial liabilities and equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

On initial recognition, the fair value of the liability component is estimated using the prevailing market interest rate for similar non-convertible instruments. This amount is recorded as a liability on an amortized cost basis using the effective interest method until extinguished upon conversion or the instrument's maturity date. Any embedded derivative liability is measured at fair value.

The conversion option classified as equity is determined by deducting the amount of the liability component from the fair value of the compound instrument as a whole. This is recognized and included in equity, net of income tax effects, and is not subsequently remeasured. In addition,

the conversion option classified as equity will remain in equity until the conversion option is exercised, in which case, the balance recognized in equity will be transferred to capital surplus - share premium. When the conversion option remains unexercised at maturity, the balance recognized in equity will be transferred to capital surplus - share premium.

Transaction costs that relate to the issue of the convertible bonds are allocated to the liability and equity components in proportion to the allocation of the gross proceeds. Transaction costs relating to the equity component are recognized directly in equity. Transaction costs relating to the liability component are included in the carrying amount of the liability component.

b) Convertible bonds contain conversion option classified as a liability

The conversion options component of the convertible bonds issued by the Group that will be settled other than by the exchange of a fixed amount of cash or other financial asset for a fixed number of the Group's own equity instruments is classified as derivative financial liabilities.

On initial recognition, the derivative financial liabilities component of the convertible bonds is recognized at fair value, and the initial carrying amount of the component of non-derivative financial liabilities is determined by deducting the amount of derivative financial liabilities from the fair value of the hybrid instrument as a whole. In subsequent periods, the non-derivative financial liabilities component of the convertible bonds is measured at amortized cost using the effective interest method. The derivative financial liabilities component is measured at fair value and the changes in fair value are recognized in profit or loss.

Transaction costs that relate to the issuance of the convertible bonds are allocated to the derivative financial liabilities component and the non-derivative financial liabilities component in proportion to their relative fair values. Transaction costs relating to the derivative financial liabilities component are recognized immediately in profit or loss. Transaction costs relating to the non-derivative financial liabilities component are included in the carrying amount of the liability component.

o. Hedge accounting

The Group designates certain hedging instruments, which include derivatives, embedded derivatives and non-derivatives in respect of foreign currency risk, as either fair value hedges or cash flow hedges.

a) Fair value hedges

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognized in profit or loss immediately, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk. The change in the fair value of the hedging instrument and the change in the hedged item attributable to the hedged risk are recognized in profit or loss in the line item relating to the hedged item.

Before 2018, hedge accounting was discontinued prospectively when ASE and its subsidiaries revoked the designated hedging relationship; when the hedging instrument expired or was sold, terminated, or exercised; or when the hedging instrument no longer met the criteria for hedge accounting. From 2018, the Group discontinues hedge accounting only when the hedging relationship ceases to meet the qualifying criteria; for instance, when the hedging instrument expires or is sold, terminated, or exercised.

b) Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income. The gain or loss relating to the ineffective portion are recognized immediately in profit or loss.

The associated gains or losses that were recognized in other comprehensive income are reclassified from equity to profit or loss as a reclassification adjustment in the line item relating to the hedged item in the same period when the hedged item affects profit or loss. If a hedge of a forecasted transaction subsequently results in the recognition of a non-financial asset or a non-financial liability, the associated gains and losses that were recognized in other comprehensive income are removed from equity and included in the initial cost of the non-financial asset or non-financial liability.

Before 2018, hedge accounting was discontinued prospectively when ASE and its subsidiaries revoked the designated hedging relationship; when the hedging instrument expired or was sold, terminated, or exercised; or when the hedging instrument no longer met the criteria for hedge accounting. From 2018, the Group discontinues hedge accounting only when the hedging relationship ceases to meet the qualifying criteria; for instance, when the hedging instrument expires or is sold, terminated, or exercised. The cumulative gain or loss on the hedging instrument that has been previously recognized in other comprehensive income from the period when the hedge was effective remains separately in equity until the forecast transaction occurs. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

p. Revenue recognition

2018

The Group identifies the contracts with customers, allocates transaction prices to performance obligations and, when performance obligations are satisfied, recognizes revenues at fixed amounts as agreed in the contracts with taking estimated volume discounts into consideration.

For contracts where the period between the date on which the Group transfers a promised good or service to a customer and the date on which the customer pays for that good or service is one year or less, the Group does not adjust the promised amount of consideration for the effects of a significant financing component.

Operating revenues

The Group's operating revenues include revenues from sale of goods and services as well as sale and leasing of real estate properties.

When customers control goods as they are manufactured in progress, the Group measures progress on the basis of input incurred relative to the total input and recognizes revenues and contract assets over time. Those contract assets are then reclassified to trade receivables at the point at which they are invoiced to customers.

The Group recognizes revenues and trade receivables when the goods are shipped or the goods are delivered to the customers' specific locations because it is the time when customers have full discretion over the manner of distribution and price to sell the goods, has the primary responsibility for sales to future customers, and bears the risks of obsolescence.

The revenues from sale of real estate properties are recognized when customers purchase real estate properties and complete the transfer procedures. The revenues from leasing real estate properties are recognized during leasing periods on the straight-line basis.

2017

Revenue is measured at the fair value of the consideration received or receivable take into account of estimated customer returns, rebates and other similar allowances.

a) Revenue from sale of goods and real estate properties

Revenue from the sale of goods and real estate properties is recognized when all the following conditions are satisfied:

- i. ASE and its subsidiaries has transferred to the buyer the significant risks and rewards of ownership of the goods;
- ii. ASE and its subsidiaries retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- iii. The amount of revenue can be measured reliably;
- iv. It is probable that the economic benefits associated with the transaction will flow to ASE and its subsidiaries; and
- v. The costs incurred or to be incurred in respect of the transaction can be measured reliably.

b) Revenue from rendering of services

Service income is recognized when services are rendered.

c) Revenue from dividend and interest income

Dividend income from investments and interest income from financial assets are recognized when they are probable that the economic benefits will flow to ASE and its subsidiaries and the amount of income can be reliably measured. Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

q. Leasing

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

The Group as lessor

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease.

The Group as lessee

Assets held under finance leases are initially recognized as assets of the Group at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the consolidated balance sheets as a finance lease obligation.

Operating lease payments are recognized as expenses on a straight-line basis over the lease term.

r. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization.

Other than stated above, all other borrowing costs are recognized in profit or loss in the period in which they are incurred.

s. Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognized as deferred revenue in the consolidated financial statements and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognized in profit or loss in the period in which they become receivable.

t. Employee benefits

a) Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related services.

b) Retirement benefits

Payments to defined contribution retirement benefit plans are recognized as expenses when employees have rendered services entitling them to the contributions.

Defined benefit costs (including service cost, net interest and remeasurement) under the defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost (including current service cost and past service cost) and net interest on the net defined benefit liability (asset) are recognized as employee benefits expense in the period they occur. Remeasurement, comprising actuarial gains and losses and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which they occur. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Net defined benefit liability (asset) represents the actual deficit (surplus) in the Group's defined benefit plan. Any surplus resulting from this calculation is limited to the present value of any refunds from the plans or reductions in future contributions to the plans.

u. Employee share options

The fair value at the grant date of the employee share options is expensed on a straight-line basis over the vesting period, based on the Group's best estimate of the number of options that are expected to ultimately vest, with a corresponding increase in capital surplus - employee share options and non-controlling interests. It is recognized as an expense in full at the grant date if vesting immediately. The grant date of issued ordinary shares for cash which are reserved for employees is the date on which the number of shares that the employees purchase is confirmed.

At each balance sheet date, the Group reviews its estimate of the number of employee share options expected to vest. The impact of the revision of the original estimates is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to the capital surplus - employee share options and non-controlling interests.

The grant by the Company of its equity instruments to the employees of a subsidiary under options is treated as a capital contribution. The fair value of employee services received under the arrangement is measured by reference to the grant-date fair value and is recognized over the vesting period as an addition to the investment in the subsidiary, with a corresponding credit to capital surplus - employee share options.

#### v. Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

##### 1) Current tax

According to the Income Tax Law of the R.O.C., an additional tax of unappropriated earnings is provided for as income tax in the year the shareholders approve to retain earnings.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

##### 2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. If a temporary difference arises from the initial recognition (other than in a business combination) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit, the resulting deferred tax asset or liability is not recognized. In addition, a deferred tax liability is not recognized on taxable temporary differences arising from the initial recognition of goodwill.

Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, unused loss carryforwards and unused tax credits for purchases of machinery and equipment to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, except where the Group is able to control the reversal of the temporary differences and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary difference associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the assets to be recovered. A previously unrecognized deferred tax asset is also reviewed at each balance sheet date and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the period in which the liabilities are settled or assets are realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the balance sheet date. The measurement of deferred

tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the balance sheet date, to recover or settle the carrying amount of its assets and liabilities.

3) Current and deferred tax for the year

Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity, respectively.

Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

## 5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in Note 4, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

### Acquisition of subsidiaries

After the acquisition of a subsidiary, the Group should identify the difference between the investment cost and the Group's share of the net fair value of the subsidiary's identifiable assets acquired and liabilities assumed. It involves critical judgments and estimations when determining the aforementioned net fair values. The management engaged independent external appraiser to assist them in identifying and evaluating the subsidiary's identifiable tangible assets, intangible assets and liabilities, including the type of intangible assets that may be identified and the related estimated cash flows or the relief from expenses. The excess of the fair value over the carrying amount of those identified tangible and intangible assets on the acquisition date will be depreciated or amortized over their remaining useful lives or expected future economic benefit lives. The management considered that the related estimation and assumption has appropriately reflected the net fair value of those identifiable assets acquired and liabilities assumed. However, there may be of high uncertainty related to the semiconductor industry varied by economic trends.

## 6. CASH AND CASH EQUIVALENTS

|                                       | December 31          |                      |
|---------------------------------------|----------------------|----------------------|
|                                       | 2018                 | 2017                 |
|                                       | NT\$                 | NT\$                 |
| Cash on hand                          | \$ 7,940             | \$ 8,404             |
| Checking accounts and demand deposits | 32,329,820           | 39,697,319           |
| Cash equivalent                       | <u>19,180,676</u>    | <u>6,372,343</u>     |
|                                       | <u>\$ 51,518,436</u> | <u>\$ 46,078,066</u> |

## 7. FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS

|                                                            | December 31 |            |
|------------------------------------------------------------|-------------|------------|
|                                                            | 2018        | 2017       |
|                                                            | NT\$        | NT\$       |
| <u>Financial assets designated as at FVTPL</u>             |             |            |
| Private-placement convertible bonds                        | \$ -        | \$ 100,496 |
| <u>Financial assets held for trading</u>                   |             |            |
| Quoted ordinary shares                                     | -           | 4,410,732  |
| Open-end mutual funds                                      | -           | 589,976    |
| Forward exchange contracts                                 | -           | 61,325     |
| Swap contracts                                             | -           | 60,538     |
|                                                            | -           | 5,122,571  |
| <u>Financial assets mandatorily classified as at FVTPL</u> |             |            |
| Derivative instruments (non-designated hedges)             |             |            |
| Swap contracts                                             | 1,557,714   | -          |
| Forward exchange contracts                                 | 32,070      | -          |
| Non-derivative financial assets                            |             |            |
| Quoted ordinary shares                                     | 5,151,255   | -          |
| Open-end mutual funds                                      | 581,800     | -          |
| Unquoted preferred shares                                  | 275,000     | -          |
| Private-placement funds                                    | 200,123     | -          |
| Hybrid financial assets                                    |             |            |
| Private-placement convertible bonds                        | 100,496     | -          |
|                                                            | 7,898,458   | 5,223,067  |
| Current                                                    | 7,262,227   | 5,223,067  |
| Non-current                                                | \$ 636,231  | \$ -       |
| <u>Financial liabilities held for trading</u>              |             |            |
| Derivative instruments (non-designated hedging)            |             |            |
| Swap contracts                                             | \$ 29,058   | \$ 652,107 |
| Forward exchange contracts                                 | 7,597       | 25,323     |
| Current                                                    | \$ 36,655   | \$ 677,430 |

The Group's private-placement convertible bonds included embedded derivative instruments which were not closely related to the host contracts and the contracts were designated as at FVTPL on initial recognition under IAS 39. After application of IFRS 9, the entire contracts are assessed and classified mandatorily as at FVTPL since they contain host contracts that are assets within the scope of IFRS 9.

At each balance sheet date, the outstanding swap contracts not accounted for hedge accounting were as follows:



| Currency                | Maturity Period | Notional Amount<br>(In Thousands) |
|-------------------------|-----------------|-----------------------------------|
| <hr/> December 31, 2018 |                 |                                   |
| Sell NT\$/Buy US\$      | 2019.01-2019.12 | NT\$49,570,469/US\$1,687,400      |
| Sell US\$/Buy CNY       | 2019.01         | US\$50,292/CNY349,800             |
| Sell US\$/Buy JPY       | 2019.01         | US\$54,203/JPY6,090,000           |
| Sell US\$/Buy NT\$      | 2019.01         | US\$208,800/NT\$6,423,242         |
| <hr/> December 31, 2017 |                 |                                   |
| Sell NT\$/Buy US\$      | 2018.01-2018.12 | NT\$53,136,302/US\$1,782,400      |
| Sell US\$/Buy CNY       | 2018.01         | US\$52,948/CNY349,800             |
| Sell US\$/Buy JPY       | 2018.02-2018.03 | US\$70,324/JPY7,870,000           |
| Sell US\$/Buy NT\$      | 2018.01         | US\$217,300/NT\$6,505,767         |

At each balance sheet date, the outstanding forward exchange contracts not accounted for hedge accounting were as follow:

| Currency                | Maturity Period | Notional Amount<br>(In Thousands) |
|-------------------------|-----------------|-----------------------------------|
| <hr/> December 31, 2018 |                 |                                   |
| Sell NT\$/Buy US\$      | 2019.01-2019.02 | NT\$2,453,540/US\$80,000          |
| Sell US\$/Buy CNY       | 2019.01         | US\$29,000/CNY200,108             |
| Sell US\$/Buy EUR       | 2019.01         | US\$4,103/EUR3,600                |
| Sell US\$/Buy JPY       | 2019.01-2019.02 | US\$37,733/JPY4,231,754           |
| Sell US\$/Buy MYR       | 2019.01-2019.02 | US\$14,000/MYR58,430              |
| Sell US\$/Buy SGD       | 2019.01-2019.02 | US\$13,400/SGD18,391              |
| <hr/> December 31, 2017 |                 |                                   |
| Sell NT\$/Buy US\$      | 2018.01         | NT\$2,389,620/US\$80,000          |
| Sell US\$/Buy CNY       | 2018.01-2018.04 | US\$125,000/CNY828,858            |
| Sell US\$/Buy EUR       | 2018.01         | US\$10,674/EUR9,000               |
| Sell US\$/Buy JPY       | 2018.01-2018.02 | US\$45,517/JPY5,111,101           |
| Sell US\$/Buy MYR       | 2018.01-2018.03 | US\$15,000/MYR61,859              |
| Sell US\$/Buy NT\$      | 2018.01         | US\$1,000/NT\$30,142              |
| Sell US\$/Buy SGD       | 2018.01-2018.02 | US\$11,300/SGD15,305              |

#### 8. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME - 2018

|                                             | December 31,<br>2018<br><hr/> NT\$ |
|---------------------------------------------|------------------------------------|
| Investments in equity instruments at FVTOCI | \$ 580,399                         |
| Investments in debt instruments at FVTOCI   | <u>1,016,924</u>                   |
|                                             | <u>\$ 1,597,323</u>                |

a. Investments in equity instruments at FVTOCI

|                           | <b>December 31,<br/>2018</b> |
|---------------------------|------------------------------|
|                           | <u>NT\$</u>                  |
| Unquoted ordinary shares  | \$ 532,047                   |
| Limited partnership       | 39,669                       |
| Unquoted preferred shares | <u>8,683</u>                 |
|                           | <u>\$ 580,399</u>            |

Investments in equity instruments were classified as available-for-sale under IAS 39. Refer to Notes 3 and 10 for information relating to their reclassification and comparative information for prior periods.

b. Investments in debt instruments at FVTOCI

|                                       | <b>December 31,<br/>2018</b> |
|---------------------------------------|------------------------------|
|                                       | <u>NT\$</u>                  |
| Unsecured subordinate corporate bonds | <u>\$ 1,016,924</u>          |

In June 2016, the Group acquired 1,000 units of perpetual unsecured subordinate corporate bonds in the amount of NT\$1,000,000 thousand. The corporate bonds are all in denomination of NT\$1,000 thousand with annual interest rate at 3.5% and with effective interest rate at 3.2% as of December 31, 2018 and 2017. The bonds were classified as other financial assets-non-current under IAS 39. Refer to Notes 3 and 14 for information relating to its reclassification and comparative information for prior periods.

## 9. CREDIT RISK MANAGEMENT FOR INVESTMENTS IN DEBT INSTRUMENTS - 2018

The Group's investment in unsecured subordinate corporate bonds is rated the equivalent of investment grade or higher and has low credit risk for the purpose of impairment assessment.

There was no significant increase in credit risk of such debt instrument since initial recognition leading to changes in interest rates and terms, and there was also no significant change in bond issuer's operation affecting the ability performing debt obligation. We evaluated that no expected credit losses existed. The Group reviews changes in bond yields and other public information periodically and makes an assessment whether there has been a significant increase in lifetime ECL since initial recognition.

## 10. AVAILABLE-FOR-SALE FINANCIAL ASSETS - 2017

|                           | <b>December 31,<br/>2017</b> |
|---------------------------|------------------------------|
|                           | <u>NT\$</u>                  |
| Unquoted ordinary shares  | \$ 605,110                   |
| Quoted ordinary shares    | 279,791                      |
| Limited partnership       | 246,072                      |
| Unquoted preferred shares | 57,367                       |
| Open-end mutual funds     | <u>23,825</u>                |
|                           | 1,212,165                    |
| Current                   | <u>89,159</u>                |
| Non-current               | <u>\$ 1,123,006</u>          |

## 11. TRADE RECEIVABLES, NET

|                                     | December 31          |                      |
|-------------------------------------|----------------------|----------------------|
|                                     | 2018                 | 2017                 |
|                                     | NT\$                 | NT\$                 |
| At amortized cost                   |                      |                      |
| Gross carrying amount               | \$ 79,636,748        | \$ 55,265,607        |
| Less: Allowance for impairment loss | <u>155,389</u>       | <u>64,901</u>        |
|                                     | <u>\$ 79,481,359</u> | <u>\$ 55,200,706</u> |

### a. For the year ended December 31, 2018

The Group's average credit terms were 30 to 90 days. The Group evaluates the risk and probability of credit loss by reference to the Group's past experiences, financial condition of each customer, as well as general economic conditions, competitive advantage and future development of the industry in which the customer operates. The Group then reviews the recoverable amount of each individual trade receivable at each balance sheet date to ensure that adequate allowance is made for possible irrecoverable amounts. In this regard, management believes the Group's credit risk was significantly reduced. In addition, the Group applies the simplified approach to providing for expected credit losses prescribed by IFRS 9, which permits the use of lifetime expected loss provision for all trade receivables. The expected credit losses on trade receivables are estimated using a provision matrix by reference to past default experience of the debtor and an analysis of the debtor's current financial position, adjusted for general economic conditions of the industry in which the debtors operate and an assessment of both the current as well as the forecast direction of economic conditions at each balance sheet date.

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery. For trade receivables that have been written off, the Group continues to engage in enforcement activity to attempt to recover the receivables due. Where recoveries are made, these are recognized in profit or loss.

The following table details the loss allowance of trade receivables based on the Group's provision matrix.

### December 31, 2018

|                               | Not Past Due         | Overdue<br>1 to 30 days | Overdue<br>31 to 90 Days | Overdue<br>Over 91 Days | Individually<br>Impaired | Total                |
|-------------------------------|----------------------|-------------------------|--------------------------|-------------------------|--------------------------|----------------------|
|                               | NT\$                 | NT\$                    | NT\$                     | NT\$                    | NT\$                     | NT\$                 |
| Expected credit loss rate     | 0%                   | 0~10%                   | 0~50%                    | 1~100%                  | 0~100%                   | -                    |
| Gross carrying amount         | \$ 71,819,583        | \$ 6,537,819            | \$ 778,799               | \$ 405,707              | \$ 94,840                | \$ 79,636,748        |
| Loss allowance (Lifetime ECL) | <u>(7,119)</u>       | <u>(4,463)</u>          | <u>(14,949)</u>          | <u>(40,080)</u>         | <u>(88,778)</u>          | <u>(155,389)</u>     |
| Amortized cost                | <u>\$ 71,812,464</u> | <u>\$ 6,533,356</u>     | <u>\$ 763,850</u>        | <u>\$ 365,627</u>       | <u>\$ 6,062</u>          | <u>\$ 79,481,359</u> |

The movements of the loss allowance of trade receivables were as follows:

|                                                  | <b>For the Year<br/>Ended<br/>December 31,<br/>2018</b> |
|--------------------------------------------------|---------------------------------------------------------|
|                                                  | <b>NT\$</b>                                             |
| Balance at January 1, 2018                       | \$ 64,901                                               |
| Net remeasurement of loss allowance              | 150,128                                                 |
| Acquisition through business combinations        | 3,482                                                   |
| Amounts written off                              | (60,109)                                                |
| Effects of foreign currency exchange differences | <u>(3,013)</u>                                          |
| Balance at December 31, 2018                     | <u><u>\$ 155,389</u></u>                                |

b. For the year ended December 31, 2017

The credit term that ASE and its subsidiaries applied in 2017 was identical with that applied by the Group in 2018. Allowance for doubtful debts is assessed by reference to the collectability of receivables by evaluating the account aging, historical experience and current financial condition of customers.

Aging of receivables based on the past due date

|                   | <b>December 31,<br/>2017</b> |
|-------------------|------------------------------|
|                   | <b>NT\$</b>                  |
| Not past due      | \$ 49,599,512                |
| 1 to 30 days      | 4,986,491                    |
| 31 to 90 days     | 562,200                      |
| More than 91 days | <u>117,404</u>               |
|                   | <u><u>\$ 55,265,607</u></u>  |

Aging of receivables that were past due but not impaired

|               | <b>December 31,<br/>2017</b> |
|---------------|------------------------------|
|               | <b>NT\$</b>                  |
| 1 to 30 days  | \$ 4,942,677                 |
| 31 to 90 days | <u>378,526</u>               |
|               | <u><u>\$ 5,321,203</u></u>   |

Except for those impaired, ASE and its subsidiaries had not provided an allowance for doubtful debts on trade receivables at each balance sheet date since there has not been a significant change in credit quality and the amounts were still considered collectible. ASE and its subsidiaries did not hold any collateral or other credit enhancements over these balances nor did it have a legal right to offset against any amounts owed by ASE and its subsidiaries to counterparties.

Movement of the allowance for doubtful trade receivables

|                                                 | <b>Impaired<br/>Individually</b> | <b>Impaired<br/>Collectively</b> | <b>Total</b>     |
|-------------------------------------------------|----------------------------------|----------------------------------|------------------|
|                                                 | <b>NT\$</b>                      | <b>NT\$</b>                      | <b>NT\$</b>      |
| Balance at January 1, 2017                      | \$ 16,453                        | \$ 37,256                        | \$ 53,709        |
| Impairment losses recognized                    | 9,527                            | 4,102                            | 13,629           |
| Amounts written off                             | -                                | (34)                             | (34)             |
| Effect of foreign currency exchange differences | <u>(850)</u>                     | <u>(1,553)</u>                   | <u>(2,403)</u>   |
| Balance at December 31, 2017                    | <u>\$ 25,130</u>                 | <u>\$ 39,771</u>                 | <u>\$ 64,901</u> |

**12. INVENTORIES**

|                                       | <b>December 31</b>   |                      |
|---------------------------------------|----------------------|----------------------|
|                                       | <b>2018</b>          | <b>2017</b>          |
|                                       | <b>NT\$</b>          | <b>NT\$</b>          |
| Finished goods                        | \$ 7,680,083         | \$ 6,740,816         |
| Work in process                       | 3,195,478            | 3,452,332            |
| Raw materials                         | 23,250,801           | 12,625,502           |
| Supplies                              | 1,892,194            | 894,196              |
| Raw materials and supplies in transit | <u>608,895</u>       | <u>548,065</u>       |
|                                       | <u>\$ 36,627,451</u> | <u>\$ 24,260,911</u> |

The cost of inventories recognized as operating costs for the years ended December 31, 2018 and 2017 were NT\$309,020,850 thousand and NT\$237,193,286 thousand, respectively, which included write-downs of inventories at NT\$980,927 thousand and NT\$398,824 thousand, respectively.

**13. INVENTORIES RELATED TO REAL ESTATE BUSINESS**

|                                  | <b>December 31</b>   |                     |
|----------------------------------|----------------------|---------------------|
|                                  | <b>2018</b>          | <b>2017</b>         |
|                                  | <b>NT\$</b>          | <b>NT\$</b>         |
| Land and buildings held for sale | \$ 20,734            | \$ 25,825           |
| Construction in progress         | 8,252,348            | 8,106,166           |
| Land held for construction       | <u>1,787,526</u>     | <u>1,687,525</u>    |
|                                  | <u>\$ 10,060,608</u> | <u>\$ 9,819,516</u> |

Construction in progress is mainly located on Hutai Road in Shanghai, China and Lidu Road in Kun Shan, China. The capitalized borrowing costs for the years ended December 31, 2018 and 2017 are disclosed in Note 26.

Construction in progress located on Caobao Road in Shanghai, China was completed in the third quarter of 2017 and immediately leased out for the lease business. As a result, the Group reclassified those buildings and land use right under the line item of inventories related to real estate business to investment properties of NT\$6,971,372 thousand and long-term prepayments for lease of NT\$5,798,449 thousand, respectively.

As of December 31, 2018 and 2017, inventories related to real estate business of NT\$10,060,608 thousand and NT\$9,818,869 thousand, respectively, are expected to be recovered longer than twelve months.

Refer to Note 38 for the carrying amount of inventories related to real estate business that had been pledged by the Group to secure bank borrowings.

#### 14. OTHER FINANCIAL ASSETS

|                                                           | December 31  |              |
|-----------------------------------------------------------|--------------|--------------|
|                                                           | 2018         | 2017         |
|                                                           | NT\$         | NT\$         |
| Time deposits with original maturity of over three months | \$ 6,320,669 | \$ 405,520   |
| Guarantee deposits                                        | 766,190      | 170,594      |
| Pledged time deposits (Note 38)                           | 496,847      | 59,456       |
| Unsecured subordinate corporate bonds (Notes 8 and 9)     | -            | 1,000,000    |
| Others (Note 38)                                          | 55           | 7,270        |
|                                                           | 7,583,761    | 1,642,840    |
| Current                                                   | 6,539,467    | 472,340      |
| Non-current                                               | \$ 1,044,294 | \$ 1,170,500 |

#### 15. INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

|                              | December 31  |               |
|------------------------------|--------------|---------------|
|                              | 2018         | 2017          |
|                              | NT\$         | NT\$          |
| Investments in associates    | \$ 9,096,895 | \$ 48,202,751 |
| Investments in joint venture | 180,494      | 486,514       |
|                              | \$ 9,277,389 | \$ 48,689,265 |

##### a. Investments in associates

1) Investments in associates accounted for using the equity method consisted of the following:

| Name of Associate                                                                | Main Business                                                                                                                          | Operating Location     | Carrying Amount as of December 31 |               |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------|---------------|
|                                                                                  |                                                                                                                                        |                        | 2018                              | 2017          |
|                                                                                  |                                                                                                                                        |                        | NT\$                              | NT\$          |
| Material associate<br>SPIL                                                       | Engaged in the assembly, testing and turnkey services of integrated circuits                                                           | R.O.C.                 | \$ -                              | \$ 45,141,910 |
| Associates that are not individually material<br>Deca Technologies Inc. ("DECA") | Holding company and the group engaged in manufacturing, development and marketing of wafer level packaging and interconnect technology | British Cayman Islands | 866,312                           | 1,583,124     |
| Hung Ching Development & Construction Co. ("HC")                                 | Engaged in the development, construction and leasing of real estate properties                                                         | R.O.C.                 | 1,100,874                         | 1,252,686     |

(Continued)

| Name of Associate                               | Main Business                                          | Operating Location | Carrying Amount as of December 31 |                      |
|-------------------------------------------------|--------------------------------------------------------|--------------------|-----------------------------------|----------------------|
|                                                 |                                                        |                    | 2018<br>NT\$                      | 2017<br>NT\$         |
| Hung Ching Kwan Co. ("HCK")                     | Engaged in the leasing of real estate properties       | R.O.C.             | \$ 295,772                        | \$ 309,630           |
| Advanced Microelectronic Products Inc. ("AMPI") | Engaged in integrated circuit                          | R.O.C.             | 184,134                           | 215,550              |
| ChipMOS Technologies Inc. ("ChipMOS")           | Engaged in the packaging and testing of semiconductors | R.O.C.             | 4,192,924                         | -                    |
| Yann Yuan Investment Co., Ltd. ("Yann Yuan")    | Engaged in investing activities                        | R.O.C.             | 2,757,028                         | -                    |
|                                                 |                                                        |                    | 9,397,044                         | 48,502,900           |
|                                                 | Less: Deferred gain on transfer of land                |                    | 300,149                           | 300,149              |
|                                                 |                                                        |                    | <u>\$ 9,096,895</u>               | <u>\$ 48,202,751</u> |
|                                                 |                                                        |                    |                                   | (Concluded)          |

2) At each balance sheet date, the percentages of ownership held by the Group were as follows:

|           | December 31 |        |
|-----------|-------------|--------|
|           | 2018        | 2017   |
| SPIL      | -           | 33.29% |
| DECA      | 22.04%      | 22.04% |
| HC        | 26.22%      | 26.22% |
| HCK       | 27.31%      | 27.31% |
| AMPI      | 38.76%      | 38.76% |
| ChipMOS   | 20.47%      | -      |
| Yann Yuan | 32.21%      | -      |

As disclosed in Note 1, the Company acquired all issued and outstanding ordinary shares of SPIL on April 30, 2018 (the acquisition date) in accordance with the joint share exchange agreement and had the control over SPIL. The investment in SPIL originally accounted for using the equity method was remeasured to the fair value at the acquisition date. The gain arising on remeasurement of NT\$7,571,882 thousand was recognized under the line item of other gains, net (Note 26) in the consolidated statements of comprehensive income for the year ended December 31, 2018.

Following the acquisition of 100% shareholdings of SPIL on April 30, 2018, the Company indirectly held ordinary shares of ChipMOS and Yann Yuan through SPIL. In June 2018, SPIL acquired additional 19,159 thousand ordinary shares of ChipMOS from open market with total cash consideration of NT\$451,563 thousand. As a result, the percentage of ownership in ChipMOS was increased from 18.23% to 20.47% and SPIL had significant influence over ChipMOS. As of December 31, 2018, the Group has completed the identification of the difference between the cost of the investment and the Group's share of the net fair value of ChipMOS' identifiable assets and liabilities.

The Group evaluated the recoverable amount of its investment in DECA by the present value of cash flow projection made by DECA's management with discount rate of 14.1%. The recoverable amount was lower than its carrying amount and, therefore, the Group recognized an impairment loss of NT\$521,010 thousand under the line item of other gains, net (Note 26) in the consolidated statements of comprehensive income for the year ended December 31, 2018.

- 3) Fair values (Level 1 inputs in terms of IFRS 13) of investments in associates with available published price quotation are summarized as follows:

|         | <b>December 31</b> |               |
|---------|--------------------|---------------|
|         | <b>2018</b>        | <b>2017</b>   |
|         | <b>NT\$</b>        | <b>NT\$</b>   |
| SPIL    | \$ -               | \$ 52,176,190 |
| HC      | \$ 1,537,307       | \$ 1,695,156  |
| AMPI    | \$ 369,925         | \$ 468,572    |
| ChipMOS | \$ 3,886,561       | \$ -          |

- 4) Summarized financial information in respect of the Group's material associate

The summarized financial information below represents amounts shown in SPIL's consolidated financial statements prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and IFRSs as endorsed by the FSC, and adjusted by the Group for equity method accounting purposes.

|                                                         | <b>December 31,<br/>2017</b>                                                  |                                                         |
|---------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------|
|                                                         | <b>NT\$</b>                                                                   |                                                         |
| Current assets                                          | \$ 49,065,912                                                                 |                                                         |
| Non-current assets                                      | 101,754,358                                                                   |                                                         |
| Current liabilities                                     | (26,194,615)                                                                  |                                                         |
| Non-current liabilities                                 | <u>(26,372,448)</u>                                                           |                                                         |
| Equity                                                  | <u>\$ 98,253,207</u>                                                          |                                                         |
| Proportion of the Group's ownership<br>interest in SPIL | 33.29%                                                                        |                                                         |
| Net assets attributable to the Group                    | \$ 32,708,493                                                                 |                                                         |
| Goodwill                                                | <u>12,433,417</u>                                                             |                                                         |
| Carrying amount                                         | <u>\$ 45,141,910</u>                                                          |                                                         |
|                                                         |                                                                               |                                                         |
|                                                         | <b>For the Period<br/>from January 1,<br/>2018 through<br/>April 29, 2018</b> | <b>For the Year<br/>Ended<br/>December 31,<br/>2017</b> |
|                                                         | <b>NT\$</b>                                                                   | <b>NT\$</b>                                             |
| Operating revenue                                       | <u>\$ 26,169,040</u>                                                          | <u>\$ 83,554,385</u>                                    |
| Gross profit                                            | <u>\$ 4,421,493</u>                                                           | <u>\$ 12,464,792</u>                                    |
| Profit before income tax                                | <u>\$ 848,072</u>                                                             | <u>\$ 4,352,032</u>                                     |
| Net profit                                              | \$ 432,310                                                                    | \$ 2,550,862                                            |
| Other comprehensive income                              | <u>633,798</u>                                                                | <u>691,966</u>                                          |
| Total comprehensive income                              | <u>\$ 1,066,189</u>                                                           | <u>\$ 3,242,828</u>                                     |
| Cash dividends received from SPIL                       | <u>\$ -</u>                                                                   | <u>\$ 1,815,275</u>                                     |



5) Aggregate information of associates that are not individually material

|                                   | <b>For the Year Ended<br/>December 31</b> |                     |
|-----------------------------------|-------------------------------------------|---------------------|
|                                   | <b>2018</b>                               | <b>2017</b>         |
|                                   | <b>NT\$</b>                               | <b>NT\$</b>         |
| The Group's share of:             |                                           |                     |
| Net profit (loss)                 | \$ 149,201                                | \$ (191,958)        |
| Other comprehensive income (loss) | <u>(613,471)</u>                          | <u>59,676</u>       |
| Total comprehensive loss          | <u>\$ (464,270)</u>                       | <u>\$ (132,282)</u> |

- 6) The investments accounted for using the equity method and the share of profit or loss and other comprehensive income or loss as of and for the years ended December 31, 2018 and 2017 were based on the associates' financial statements audited or reviewed by auditors for the same periods.

b. Investments in joint venture

- 1) The joint venture that was not individually material and accounted for using the equity method was the Group's investment in ASE Embedded Electronics Inc. (ASEEE). As of December 31, 2018 and 2017, the percentages of ownership were both 51%. ASEEE is located in R.O.C. and engaged in the production of embedded substrate.
- 2) ASE's board of directors resolved in February 2019 to purchase ordinary shares newly issued by ASEEE at par value through its capital increase by cash. The total consideration will not be more than NT\$1,500,000 thousand, representing 150,000 thousand ordinary shares.
- 3) Aggregate information of the Group's joint venture that is not individually material

|                                                            | <b>For the Year Ended<br/>December 31</b> |                     |
|------------------------------------------------------------|-------------------------------------------|---------------------|
|                                                            | <b>2018</b>                               | <b>2017</b>         |
|                                                            | <b>NT\$</b>                               | <b>NT\$</b>         |
| The Group's share of net loss and total comprehensive loss | <u>\$ (306,156)</u>                       | <u>\$ (184,366)</u> |

- 4) The investments accounted for using the equity method and the share of loss and other comprehensive loss as of and for the years ended December 31, 2018 and 2017 were based on the joint venture's financial statements audited by auditors for the same period.

## 16. PROPERTY, PLANT AND EQUIPMENT

The carrying amounts of each class of property, plant and equipment were as follows:

|                                                   | <b>December 31</b>    |                       |
|---------------------------------------------------|-----------------------|-----------------------|
|                                                   | <b>2018</b>           | <b>2017</b>           |
|                                                   | <b>NT\$</b>           | <b>NT\$</b>           |
| Land                                              | \$ 10,165,969         | \$ 3,258,518          |
| Buildings and improvements                        | 78,963,937            | 58,272,864            |
| Machinery and equipment                           | 108,087,970           | 66,185,198            |
| Other equipment                                   | 6,463,160             | 1,588,113             |
| Construction in progress and machinery in transit | <u>10,911,552</u>     | <u>5,863,713</u>      |
|                                                   | <u>\$ 214,592,588</u> | <u>\$ 135,168,406</u> |

For the year ended December 31, 2018

|                                                      | Land                 | Buildings and Improvements | Machinery and Equipment | Other Equipment      | Construction in Progress and Machinery in Transit | Total                |
|------------------------------------------------------|----------------------|----------------------------|-------------------------|----------------------|---------------------------------------------------|----------------------|
|                                                      | NT\$                 | NT\$                       | NT\$                    | NT\$                 | NT\$                                              | NT\$                 |
| <u>Cost</u>                                          |                      |                            |                         |                      |                                                   |                      |
| Balance at January 1, 2018                           | \$ 3,258,518         | \$100,187,928              | \$253,198,003           | \$ 7,812,080         | \$ 5,863,713                                      | \$370,320,242        |
| Additions                                            | -                    | 144,898                    | 192,673                 | 84,860               | 38,669,807                                        | 39,092,238           |
| Disposals                                            | -                    | (677,206)                  | (26,493,282)            | (2,251,060)          | (34,902)                                          | (29,456,450)         |
| Reclassification                                     | -                    | 5,388,709                  | 32,060,513              | 2,148,211            | (39,612,324)                                      | (14,891)             |
| Acquisitions through business combinations (Note 30) | 6,880,400            | 37,127,957                 | 95,810,062              | 11,122,171           | 5,781,189                                         | 156,721,779          |
| Effect of foreign currency exchange differences      | 27,051               | (464,275)                  | (929,579)               | (78,095)             | 244,069                                           | (1,200,829)          |
| Balance at December 31, 2018                         | <u>\$ 10,165,969</u> | <u>\$141,708,011</u>       | <u>\$353,838,390</u>    | <u>\$ 18,838,167</u> | <u>\$ 10,911,552</u>                              | <u>\$535,462,089</u> |
| <u>Accumulated depreciation and impairment</u>       |                      |                            |                         |                      |                                                   |                      |
| Balance at January 1, 2018                           | \$ -                 | \$ 41,915,064              | \$187,012,805           | \$ 6,223,967         | \$ -                                              | \$235,151,836        |
| Depreciation expenses                                | -                    | 6,325,948                  | 31,751,251              | 1,816,587            | -                                                 | 39,893,786           |
| Impairment losses recognized                         | -                    | 29,531                     | 97,680                  | 5,860                | -                                                 | 133,071              |
| Disposals                                            | -                    | (491,033)                  | (25,704,778)            | (2,070,302)          | -                                                 | (28,266,113)         |
| Reclassification                                     | -                    | (265)                      | -                       | -                    | -                                                 | (265)                |
| Acquisitions through business combinations (Note 30) | -                    | 15,097,920                 | 53,210,063              | 6,428,174            | -                                                 | 74,736,157           |
| Effect of foreign currency exchange differences      | -                    | (133,091)                  | (616,601)               | (29,279)             | -                                                 | (778,971)            |
| Balance at December 31, 2018                         | <u>\$ -</u>          | <u>\$ 62,744,074</u>       | <u>\$245,750,420</u>    | <u>\$ 12,375,007</u> | <u>\$ -</u>                                       | <u>\$320,869,501</u> |

For the year ended December 31, 2017

|                                                 | Land                | Buildings and Improvements | Machinery and Equipment | Other Equipment     | Construction in Progress and Machinery in Transit | Total                |
|-------------------------------------------------|---------------------|----------------------------|-------------------------|---------------------|---------------------------------------------------|----------------------|
|                                                 | NT\$                | NT\$                       | NT\$                    | NT\$                | NT\$                                              | NT\$                 |
| <u>Cost</u>                                     |                     |                            |                         |                     |                                                   |                      |
| Balance at January 1, 2017                      | \$ 3,365,013        | \$ 96,258,175              | \$248,200,756           | \$ 8,474,661        | \$ 7,713,542                                      | \$364,012,147        |
| Additions                                       | -                   | 350,434                    | 102,301                 | 130,659             | 23,094,288                                        | 23,677,682           |
| Disposals                                       | -                   | (609,294)                  | (8,449,949)             | (763,937)           | (73,248)                                          | (9,896,428)          |
| Reclassification                                | (35,965)            | 6,483,392                  | 18,331,738              | 174,947             | (25,428,464)                                      | (474,352)            |
| Effect of foreign currency exchange differences | (70,530)            | (2,294,779)                | (4,986,843)             | (204,250)           | 557,595                                           | (6,998,807)          |
| Balance at December 31, 2017                    | <u>\$ 3,258,518</u> | <u>\$100,187,928</u>       | <u>\$253,198,003</u>    | <u>\$ 7,812,080</u> | <u>\$ 5,863,713</u>                               | <u>\$370,320,242</u> |
| <u>Accumulated depreciation and impairment</u>  |                     |                            |                         |                     |                                                   |                      |
| Balance at January 1, 2017                      | \$ -                | \$ 38,229,544              | \$175,499,994           | \$ 6,385,080        | \$ 17,288                                         | \$220,131,906        |
| Depreciation expenses                           | -                   | 5,156,558                  | 22,722,307              | 746,422             | -                                                 | 28,625,287           |
| Impairment losses recognized                    | -                   | 2,310                      | 286,880                 | 368                 | -                                                 | 289,558              |
| Disposals                                       | -                   | (478,903)                  | (7,540,654)             | (720,319)           | (17,288)                                          | (8,757,164)          |
| Reclassification                                | -                   | (210,080)                  | 34,452                  | (24,117)            | -                                                 | (199,745)            |
| Effect of foreign currency exchange differences | -                   | (784,365)                  | (3,990,174)             | (163,467)           | -                                                 | (4,938,006)          |
| Balance at December 31, 2017                    | <u>\$ -</u>         | <u>\$ 41,915,064</u>       | <u>\$187,012,805</u>    | <u>\$ 6,223,967</u> | <u>\$ -</u>                                       | <u>\$235,151,836</u> |

Due to the Group's future operation plans and capacity evaluation or production demands in segment of packaging and testing, the Group believed that a portion of property, plant and equipment does not qualify for the production needs and, therefore, recognized an impairment loss of NT\$133,071 thousand and NT\$289,558 thousand under the line item of other operating income and expenses in the consolidated statements of comprehensive income (Note 26) for the years ended December 31, 2018 and 2017, respectively. The recoverable amount of a portion of the impaired property, plant and equipment is determined by its fair value less costs of disposal, of which the fair value is based on the recent quoted prices of assets with similar age and obsolescence that provided by the vendors in secondary market. The recent quoted prices of assets are a Level 3 input because the secondary market is not very active. The recoverable amount of the other portion of the impaired property, plant and equipment is determined on the basis of its value in use and the Group expects to derive zero future cash flows from these assets.

Each class of property, plant and equipment was depreciated on a straight-line basis over the following useful lives:

|                            |             |
|----------------------------|-------------|
| Buildings and improvements |             |
| Main plant buildings       | 10-55 years |
| Cleanrooms                 | 10-20 years |
| Others                     | 3-20 years  |
| Machinery and equipment    | 2-10 years  |
| Other equipment            | 2-20 years  |

The capitalized borrowing costs for the years ended December 31, 2018 and 2017 are disclosed in Note 26.

## 17. INVESTMENT PROPERTIES

For the year ended December 31, 2018

|                                                  | <b>Land</b>      | <b>Buildings and</b> | <b>Total</b>        |
|--------------------------------------------------|------------------|----------------------|---------------------|
|                                                  | <b>NT\$</b>      | <b>Improvements</b>  | <b>NT\$</b>         |
| <u>Cost</u>                                      |                  | <b>NT\$</b>          | <b>NT\$</b>         |
| Balance at January 1, 2018                       | \$ 35,965        | \$ 8,406,785         | \$ 8,442,750        |
| Additions                                        | -                | 125,853              | 125,853             |
| Transferred from property, plant and equipment   | -                | 14,891               | 14,891              |
| Effects of foreign currency exchange differences | -                | (137,739)            | (137,739)           |
| Balance at December 31, 2018                     | <u>\$ 35,965</u> | <u>\$ 8,409,790</u>  | <u>\$ 8,445,755</u> |
| <u>Accumulated depreciation and impairment</u>   |                  |                      |                     |
| Balance at January 1, 2018                       | \$ -             | \$ 323,314           | \$ 323,314          |
| Depreciation expenses                            | -                | 392,667              | 392,667             |
| Transferred from property, plant and equipment   | -                | 265                  | 265                 |
| Effects of foreign currency exchange differences | -                | (8,870)              | (8,870)             |
| Balance at December 31, 2018                     | <u>\$ -</u>      | <u>\$ 707,376</u>    | <u>\$ 707,376</u>   |
| Carrying amount at December 31, 2018             | <u>\$ 35,965</u> | <u>\$ 7,702,414</u>  | <u>\$ 7,738,379</u> |

For the year ended December 31, 2017

|                                                                                                | <b>Land</b>      | <b>Buildings and</b> | <b>Total</b>        |
|------------------------------------------------------------------------------------------------|------------------|----------------------|---------------------|
|                                                                                                | <b>NT\$</b>      | <b>Improvements</b>  | <b>NT\$</b>         |
| <u>Cost</u>                                                                                    |                  | <b>NT\$</b>          | <b>NT\$</b>         |
| Balance at January 1, 2017                                                                     | \$ -             | \$ -                 | \$ -                |
| Additions                                                                                      | -                | 186,535              | 186,535             |
| Disposals                                                                                      | -                | (342)                | (342)               |
| Transferred from inventories related to real estate business and property, plant and equipment | 35,965           | 8,114,110            | 8,150,075           |
| Effects of foreign currency exchange differences                                               | -                | 106,482              | 106,482             |
| Balance at December 31, 2017                                                                   | <u>\$ 35,965</u> | <u>\$ 8,406,785</u>  | <u>\$ 8,442,750</u> |

(Continued)

|                                                  | <u>Land</u><br>NT\$ | <u>Buildings and<br/>Improvements</u><br>NT\$ | <u>Total</u><br>NT\$               |
|--------------------------------------------------|---------------------|-----------------------------------------------|------------------------------------|
| <u>Accumulated depreciation and impairment</u>   |                     |                                               |                                    |
| Balance at January 1, 2017                       | \$ -                | \$ -                                          | \$ -                               |
| Depreciation expenses                            | -                   | 122,231                                       | 122,231                            |
| Disposals                                        | -                   | (161)                                         | (161)                              |
| Transferred from property, plant and equipment   | -                   | 199,745                                       | 199,745                            |
| Effects of foreign currency exchange differences | -                   | <u>1,499</u>                                  | <u>1,499</u>                       |
| Balance at December 31, 2017                     | <u>\$ -</u>         | <u>\$ 323,314</u>                             | <u>\$ 323,314</u>                  |
| Carrying amount at December 31, 2017             | <u>\$ 35,965</u>    | <u>\$ 8,083,471</u>                           | <u>\$ 8,119,436</u><br>(Concluded) |

The investment properties were depreciated on a straight-line basis over the following useful lives:

|                |             |
|----------------|-------------|
| Main buildings | 10-40 years |
| Others         | 3-20 years  |

The fair value of the investment properties was approximately NT\$11,764,829 thousand and NT\$11,560,440 thousand as of December 31, 2018 and 2017, respectively, which was measured using the market approach and the income approach based on level 3 inputs by independent professional appraisers. The significant unobservable inputs were discounted rates.

Investment properties are held under freehold interests. Refer to Note 38 for the carrying amount of the investment properties that had been pledged by the Group to secure borrowings.

## 18. GOODWILL

|                                                         | <u>Cost</u><br>NT\$  | <u>Accumulated<br/>Impairment</u><br>NT\$ | <u>Carrying<br/>amount</u><br>NT\$ |
|---------------------------------------------------------|----------------------|-------------------------------------------|------------------------------------|
| Balance at January 1, 2018                              | \$ 12,348,607        | \$ 2,414,113                              | \$ 9,934,494                       |
| Acquisitions through business combinations<br>(Note 30) | 39,334,426           | -                                         | 39,334,426                         |
| Effect of foreign currency exchange differences         | <u>49,721</u>        | <u>-</u>                                  | <u>49,721</u>                      |
| Balance at December 31, 2018                            | <u>\$ 51,732,754</u> | <u>\$ 2,414,113</u>                       | <u>\$ 49,318,641</u>               |
| Balance at January 1, 2017                              | \$ 12,479,305        | \$ 1,988,996                              | \$ 10,490,309                      |
| Impairment losses recognized                            | -                    | 425,117                                   | (425,117)                          |
| Effect of foreign currency exchange differences         | <u>(130,698)</u>     | <u>-</u>                                  | <u>(130,698)</u>                   |
| Balance at December 31, 2017                            | <u>\$ 12,348,607</u> | <u>\$ 2,414,113</u>                       | <u>\$ 9,934,494</u>                |

### a. Allocating goodwill to cash-generating units

Goodwill had been allocated to the following cash-generating units for impairment testing purposes: packaging segment, testing segment, EMS segment and other segment. The carrying amounts of goodwill allocated to cash-generating units were as follows:

| Cash-generating units | December 31          |                     |
|-----------------------|----------------------|---------------------|
|                       | 2018                 | 2017                |
|                       | NT\$                 | NT\$                |
| Packaging segment     | \$ 35,166,016        | \$ 1,362,724        |
| Testing segment       | 13,356,436           | \$ 7,775,581        |
| Others                | <u>796,189</u>       | <u>796,189</u>      |
|                       | <u>\$ 49,318,641</u> | <u>\$ 9,934,494</u> |

b. Impairment assessment

At the end of each year, the Group performs impairment assessment by reviewing the recoverable amounts based on value in use which incorporates cash flow projections covering a five-year period estimated by management. The estimated cash flows are discounted to their present value. The discount rate were 8.01%-8.57% and 8.97%-11.29% as of December 31, 2018 and 2017, respectively. The key assumption used in value in use calculations was growth rates for operating revenue, which were based on the revenue forecast for the Group and the industry as well as the Group's historical experience.

As of December 31, 2017, the recoverable amount of other segment was lower than its carrying amount since its actual growth in revenue did not meet its forecast previously made by management. The review led to the recognition of an impairment loss of NT\$425,117 thousand under the line item of other gains, net (Note 26) in the consolidated statements of comprehensive income for the year ended December 31, 2017.

Management believed that any reasonably possible change in the key assumptions on which recoverable amount would not cause the aggregate carrying amount of the cash-generating unit to exceed its aggregate recoverable amount significantly.

## 19. OTHER INTANGIBLE ASSETS

The carrying amounts of each class of other intangible assets were as follows:

|                                          | December 31          |                     |
|------------------------------------------|----------------------|---------------------|
|                                          | 2018                 | 2017                |
|                                          | NT\$                 | NT\$                |
| Customer relationships                   | \$ 10,366,797        | \$ 113,776          |
| Computer software                        | 1,159,682            | 864,331             |
| Patents and acquired specific technology | 19,255,669           | 319,402             |
| Others                                   | <u>115,552</u>       | <u>109,356</u>      |
|                                          | <u>\$ 30,897,700</u> | <u>\$ 1,406,865</u> |

For the year ended December 31, 2018

|                                                           | <b>Customer<br/>Relationships</b> | <b>Computer<br/>Software</b> | <b>Patents and<br/>Acquired<br/>Specific<br/>Technology</b> | <b>Others</b>     | <b>Total</b>         |
|-----------------------------------------------------------|-----------------------------------|------------------------------|-------------------------------------------------------------|-------------------|----------------------|
|                                                           | <b>NT\$</b>                       | <b>NT\$</b>                  | <b>NT\$</b>                                                 | <b>NT\$</b>       | <b>NT\$</b>          |
| <u>Cost</u>                                               |                                   |                              |                                                             |                   |                      |
| Balance at January 1,<br>2018                             | \$ 915,636                        | \$ 3,686,452                 | \$ 389,486                                                  | \$ 198,754        | \$ 5,190,328         |
| Additions                                                 | -                                 | 528,883                      | -                                                           | 8,776             | 537,659              |
| Disposals                                                 | -                                 | (95,358)                     | (231)                                                       | (4,000)           | (99,589)             |
| Acquisition through<br>business combinations<br>(Note 30) | 11,000,000                        | 274,868                      | 20,200,000                                                  | 32,800            | 31,507,668           |
| Effect of foreign currency<br>exchange differences        | -                                 | 6,200                        | (899)                                                       | (332)             | 4,969                |
| Balance at December 31,<br>2018                           | <u>\$ 11,915,636</u>              | <u>\$ 4,401,045</u>          | <u>\$ 20,588,356</u>                                        | <u>\$ 235,998</u> | <u>\$ 37,141,035</u> |
| <u>Accumulated amortization</u>                           |                                   |                              |                                                             |                   |                      |
| Balance at January 1,<br>2018                             | \$ 801,860                        | \$ 2,822,121                 | \$ 70,084                                                   | \$ 89,398         | \$ 3,783,463         |
| Amortization expense                                      | 746,979                           | 373,536                      | 1,263,309                                                   | 18,626            | 2,402,450            |
| Disposals                                                 | -                                 | (95,202)                     | (231)                                                       | (4,000)           | (99,433)             |
| Acquisition through<br>business combinations<br>(Note 30) | -                                 | 137,799                      | -                                                           | 15,483            | 153,282              |
| Effect of foreign currency<br>exchange differences        | -                                 | 3,109                        | (475)                                                       | 939               | 3,573                |
| Balance at December 31,<br>2018                           | <u>\$ 1,548,839</u>               | <u>\$ 3,241,363</u>          | <u>\$ 1,332,687</u>                                         | <u>\$ 120,446</u> | <u>\$ 6,243,335</u>  |

For the year ended December 31, 2017

|                                                    | <b>Customer<br/>Relationships</b> | <b>Computer<br/>Software</b> | <b>Patents and<br/>Acquired<br/>Specific<br/>Technology</b> | <b>Others</b>     | <b>Total</b>        |
|----------------------------------------------------|-----------------------------------|------------------------------|-------------------------------------------------------------|-------------------|---------------------|
|                                                    | <b>NT\$</b>                       | <b>NT\$</b>                  | <b>NT\$</b>                                                 | <b>NT\$</b>       | <b>NT\$</b>         |
| <u>Cost</u>                                        |                                   |                              |                                                             |                   |                     |
| Balance at January 1,<br>2017                      | \$ 915,636                        | \$ 3,552,229                 | \$ 514,443                                                  | \$ 192,392        | \$ 5,174,700        |
| Additions                                          | -                                 | 265,497                      | -                                                           | 12,328            | 277,825             |
| Disposals                                          | -                                 | (83,595)                     | (123,744)                                                   | (4,978)           | (212,317)           |
| Effect of foreign currency<br>exchange differences | -                                 | (47,679)                     | (1,213)                                                     | (988)             | (49,880)            |
| Balance at December 31,<br>2017                    | <u>\$ 915,636</u>                 | <u>\$ 3,686,452</u>          | <u>\$ 389,486</u>                                           | <u>\$ 198,754</u> | <u>\$ 5,190,328</u> |

(Continued)

|                                                    | <b>Customer<br/>Relationships</b> | <b>Computer<br/>Software</b> | <b>Patents and<br/>Acquired<br/>Specific<br/>Technology</b> | <b>Others</b>    | <b>Total</b>                       |
|----------------------------------------------------|-----------------------------------|------------------------------|-------------------------------------------------------------|------------------|------------------------------------|
|                                                    | <b>NT\$</b>                       | <b>NT\$</b>                  | <b>NT\$</b>                                                 | <b>NT\$</b>      | <b>NT\$</b>                        |
| <u>Accumulated amortization</u>                    |                                   |                              |                                                             |                  |                                    |
| Balance at January 1,<br>2017                      | \$ 721,547                        | \$ 2,608,702                 | \$ 155,216                                                  | \$ 71,974        | \$ 3,557,439                       |
| Amortization expense                               | 80,313                            | 316,580                      | 43,493                                                      | 17,280           | 457,666                            |
| Disposals                                          | -                                 | (72,481)                     | (123,743)                                                   | -                | (196,224)                          |
| Effect of foreign currency<br>exchange differences | -                                 | (30,680)                     | (4,882)                                                     | 144              | (35,418)                           |
| Balance at December 31,<br>2017                    | <u>\$ 801,860</u>                 | <u>\$ 2,822,121</u>          | <u>\$ 70,084</u>                                            | <u>\$ 89,398</u> | <u>\$ 3,783,463</u><br>(Concluded) |

Each class of other intangible assets was amortized on the straight-line basis over the following useful lives:

|                                          |            |
|------------------------------------------|------------|
| Customer relationships                   | 11 years   |
| Computer software                        | 2-10 years |
| Patents and acquired specific technology | 5-15 years |
| Others                                   | 5-32 years |

## 20. LONG-TERM PREPAYMENTS FOR LEASE

Long-term prepayments for lease mainly represented land use rights located in China with periods for use from 30 to 70 years and will expire through 2048 to 2089.

## 21. BORROWINGS

### a. Short-term borrowings

Short-term borrowings mainly represented unsecured revolving bank loans with annual interest rates at 0.76%-5.10% and 0.80%-4.79% as of December 31, 2018 and 2017, respectively.

### b. Long-term borrowings

#### 1) Bank loans

|                                                                                                                                                                          | <b>December 31</b> |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------|
|                                                                                                                                                                          | <b>2018</b>        | <b>2017</b>                 |
|                                                                                                                                                                          | <b>NT\$</b>        | <b>NT\$</b>                 |
| Working capital bank loans                                                                                                                                               |                    |                             |
| Syndicated bank loans - repayable through May 2019 to<br>May 2023, annual interest rates were 1.80% and<br>2.61%-2.70% as of December 31, 2018 and 2017,<br>respectively | \$ 55,000,000      | \$ 4,761,600<br>(Continued) |

|                                                                                                                                                                 | <b>December 31</b>    |                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|
|                                                                                                                                                                 | <b>2018</b>           | <b>2017</b>          |
|                                                                                                                                                                 | <b>NT\$</b>           | <b>NT\$</b>          |
| Others - repayable through February 2019 to October 2023, annual interest rates were 0.75%-3.77% and 0.93%-2.10% as of December 31, 2018 and 2017, respectively | \$ 75,533,354         | \$ 23,941,947        |
| Mortgage loans                                                                                                                                                  |                       |                      |
| Repayable through July 2019 to June 2023, annual interest rates were 5.39% and 4.95%-5.39% as of December 31, 2018 and 2017                                     | <u>4,393,826</u>      | <u>4,705,149</u>     |
|                                                                                                                                                                 | 134,927,180           | 33,408,696           |
| Less: unamortized arrangement fee                                                                                                                               | <u>128,083</u>        | <u>1,200</u>         |
|                                                                                                                                                                 | 134,799,097           | 33,407,496           |
| Less: current portion                                                                                                                                           | <u>10,779,034</u>     | <u>8,261,625</u>     |
|                                                                                                                                                                 | <u>\$ 124,020,063</u> | <u>\$ 25,145,871</u> |
|                                                                                                                                                                 |                       | (Concluded)          |

Pursuant to some of the above working capital bank loans agreements, the Company and its subsidiaries should maintain certain financial covenants including current ratio, leverage ratio, tangible net assets and interest coverage ratio. Such financial ratios are calculated based on each of their annual audited consolidated financial statements or semi-annual reviewed consolidated financial statements. The Company and its subsidiaries were in compliance with all of the financial covenants as of December 31, 2018 and 2017.

2) Long-term bills payable

|                                                                                                                                                            | <b>December 31</b>  |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|
|                                                                                                                                                            | <b>2018</b>         | <b>2017</b>         |
|                                                                                                                                                            | <b>NT\$</b>         | <b>NT\$</b>         |
| China Bills Finance Corporation, repayable in February 2020, annual interest rate were 0.99% and 0.96% as of December 31, 2018 and 2017, respectively      | \$ 1,000,000        | \$ 1,000,000        |
| International Bills Finance Corporation, repayable in March 2020, annual interest rate were 1.00% and 0.96% as of December 31, 2018 and 2017, respectively | 1,000,000           | 1,000,000           |
| Ta Ching Bills Finance Corporation, repayable in January 2020, annual interest rates was 0.98% as of December 31, 2018                                     | <u>1,100,000</u>    | <u>-</u>            |
|                                                                                                                                                            | 3,100,000           | 2,000,000           |
| Less: unamortized discounts                                                                                                                                | <u>768</u>          | <u>868</u>          |
|                                                                                                                                                            | <u>\$ 3,099,232</u> | <u>\$ 1,999,132</u> |



## 22. BONDS PAYABLE

|                                                                                                    | December 31          |                      |
|----------------------------------------------------------------------------------------------------|----------------------|----------------------|
|                                                                                                    | 2018                 | 2017                 |
|                                                                                                    | NT\$                 | NT\$                 |
| Unsecured domestic bonds                                                                           |                      |                      |
| Repayable at maturity in January 2021 and interest due annually with annual interest rate at 1.30% | \$ 7,000,000         | \$ 7,000,000         |
| Repayable at maturity in January 2023 and interest due annually with annual interest rate at 1.50% | 2,000,000            | 2,000,000            |
| Repayable at maturity in January 2022 and interest due annually with annual interest rate at 1.25% | 3,700,000            | 3,700,000            |
| Repayable at maturity in January 2024 and interest due annually with annual interest rate at 1.45% | 4,300,000            | 4,300,000            |
| Unsecured convertible overseas bonds                                                               |                      |                      |
| US\$200,000 thousand (linked to New Taiwan dollar)                                                 | -                    | 6,185,600            |
|                                                                                                    | 17,000,000           | 23,185,600           |
| Less: discounts on bonds payable                                                                   | 14,064               | 42,820               |
|                                                                                                    | 16,985,936           | 23,142,780           |
| Less: current portion                                                                              | -                    | 6,161,197            |
|                                                                                                    | <u>\$ 16,985,936</u> | <u>\$ 16,981,583</u> |

- In September 2013, ASE offered the third unsecured convertible overseas bonds (the “Bonds”) in US\$400,000 thousand. The Bonds are zero coupon bonds with a maturity of 5 years. In 2017, the Bonds holders have exercised the conversion right to convert the Bonds of US\$399,600 thousand into ASE’s ordinary shares at conversion prices from NT\$27.95 to NT\$28.96. Except those have been converted, ASE, based on the board of directors’ resolution, has early redeemed the outstanding Bonds of US\$400 thousand in September 2017.
- In July 2015, ASE offered the forth unsecured convertible overseas bonds (the “Currency Linked Bonds”) in US\$200,000 thousand. The Currency Linked Bonds are zero coupon bonds with a maturity of 2.75 years. The Currency Linked Bonds were expired in March 2018 and none has been exercised. ASE redeemed the Currency Linked Bonds in cash in an amount by converting the par value into New Taiwan dollar amount using a fixed exchange rate of US\$1 to NT\$30.928 and then back to U.S. dollar amount using the applicable prevailing rate at the time of redemption. At the same time, ASE reclassified NT\$214,022 thousand from capital surplus arising from equity component of convertible bonds to capital surplus arising from expired share options.
- To focus on corporate sustainability and to carry out the commitment to environmental protection and energy conservation, Anstock II Limited, a subsidiary the Company 100% owned, offered overseas bonds in US\$300,000 thousand with the maturity of 3 years and annual interest rate of 2.125% (the “Green Bonds”) in July 2014. The Green Bonds are unconditionally and irrevocably guaranteed by ASE and the proceeds were used to fund certain eligible projects to promote the Group’s transition to low-carbon and climate resilient growth. The Company’s subsidiary has repaid the Green Bonds in July 2017.
- In October 2014, SPIL offered the fourth unsecured convertible overseas bonds (the “SPIL Bonds”) in US\$400,000 thousand. The SPIL Bonds are zero coupon bonds with a maturity of 5 years. During May 1, 2018 to June 30, 2018, all outstanding SPIL Bonds of US\$148,000 thousand were converted into SPIL’s ordinary shares and then such ordinary shares were repurchased by the Company with a total consideration of NT\$5,216,985 thousand (NT\$51.2 per ordinary share, 0.3% securities transactions tax not yet deducted) pursuant to the supplemental indenture. In addition, capital surplus arising from the difference between consideration received and the carrying amount of the subsidiaries’ net assets during actual disposal or acquisition was decreased by NT\$388,491 thousand.

## 23. OTHER PAYABLES

|                                                                 | December 31          |                      |
|-----------------------------------------------------------------|----------------------|----------------------|
|                                                                 | 2018                 | 2017                 |
|                                                                 | NT\$                 | NT\$                 |
| Accrued salary and bonus                                        | \$ 10,591,202        | \$ 7,292,254         |
| Payables for property, plant and equipment                      | 7,995,634            | 4,623,268            |
| Accrued employees' compensation and remuneration to directors   | 3,038,417            | 2,568,880            |
| Accrued employee insurance                                      | 875,638              | 657,176              |
| Accrued utilities                                               | 427,106              | 417,257              |
| Payables for patents and acquired specific technology (Note 37) | 57,590               | 93,000               |
| Others                                                          | <u>8,018,295</u>     | <u>5,726,052</u>     |
|                                                                 | <u>\$ 31,003,882</u> | <u>\$ 21,377,887</u> |

## 24. RETIREMENT BENEFIT PLANS

### a. Defined contribution plans

- 1) The pension plan under the R.O.C. Labor Pension Act ("LPA") for the Group's R.O.C. resident employees is a government-managed defined contribution plan. Based on the LPA, the Company and its subsidiaries in Taiwan makes monthly contributions to employees' individual pension accounts at 6% of their monthly salaries.
- 2) The subsidiaries located in China, U.S.A., Malaysia, Singapore and Mexico also make contributions at various ranges according to relevant local regulations.

### b. Defined benefit plans

- 1) The Company and its subsidiaries in Taiwan joined the defined benefit pension plan under the R.O.C. Labor Standards Law operated by the government. Pension benefits are calculated on the basis of the length of service and average monthly salaries of the last six months before retirement. The Company and its subsidiaries in Taiwan make contributions based on a certain percentage of their domestic employees' monthly salaries to a pension fund administered by the pension fund monitoring committee. Before the end of each year, the Company and its subsidiaries in Taiwan assess the balance in the pension fund. If the amount of the balance in the pension fund is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Company and its subsidiaries in Taiwan are required to fund the difference in one appropriation that should be made before the end of March of the next year. Pension contributions are deposited in the Bank of Taiwan in the committee's name and are managed by the Bureau of Labor Funds, Ministry of Labor ("the Bureau"); the Company and its subsidiaries in Taiwan have no right to influence the investment policy and strategy.
- 2) ASE Japan has a pension plan under which eligible employees with more than ten years of service are entitled to receive pension benefits based on their length of service and salaries at the time of termination of employment. ASE Japan makes contributions based on a certain amount of pension cost to employees.

ASE Korea also has a pension plan under which eligible employees and directors with more than one year of service are entitled to receive a lump-sum payment upon termination of their service with ASE Korea, based on their length of service and salaries at the time of termination. ASE Korea makes contributions based on a certain percentage of pension cost to an external financial institution administered by the management and in the names of employees.

- 3) ASE, SPIL, ASE Test, Inc. and ASE Electronics Inc. maintain pension plans for executive managers. Pension costs under the plans were NT\$11,137 thousand and NT\$3,170 thousand for the years ended December 31, 2018 and 2017, respectively. As of December 31, 2018 and 2017, accrued pension liabilities for executive managers were NT\$320,542 thousand and NT\$209,637 thousand, respectively.
- 4) The amounts included in the consolidated balance sheets arising from the Group's obligation in respect of its defined benefit plans excluding those for executive managers were as follows:

|                                                      | <b>December 31</b>  |                     |
|------------------------------------------------------|---------------------|---------------------|
|                                                      | <b>2018</b>         | <b>2017</b>         |
|                                                      | <b>NT\$</b>         | <b>NT\$</b>         |
| Present value of the defined benefit obligation      | \$ 10,297,139       | \$ 7,910,638        |
| Fair value of the plan assets                        | <u>(5,492,123)</u>  | <u>(4,341,373)</u>  |
| Present value of unfunded defined benefit obligation | 4,805,016           | 3,569,265           |
| Recorded under others payables                       | (18,791)            | (24,638)            |
| Recorded under other non-current assets              | <u>11,910</u>       | <u>182,421</u>      |
| Net defined benefit liability                        | <u>\$ 4,798,135</u> | <u>\$ 3,727,048</u> |

Movements in net defined benefit liability (asset) were as follows:

|                                                                       | <b>Present Value of<br/>the Defined<br/>Benefit<br/>Obligation</b> | <b>Fair Value of<br/>the Plan Assets</b> | <b>Net Defined<br/>Benefit Liability<br/>(Asset)</b> |
|-----------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------|------------------------------------------------------|
|                                                                       | <b>NT\$</b>                                                        | <b>NT\$</b>                              | <b>NT\$</b>                                          |
| Balance at January 1, 2018                                            | <u>\$ 7,910,638</u>                                                | <u>\$ (4,341,373)</u>                    | <u>\$ 3,569,265</u>                                  |
| Service cost                                                          |                                                                    |                                          |                                                      |
| Current service cost                                                  | 224,126                                                            | -                                        | 224,126                                              |
| Net interest expense (income)                                         | <u>178,779</u>                                                     | <u>(122,709)</u>                         | <u>56,070</u>                                        |
| Recognized in profit or loss                                          | <u>402,905</u>                                                     | <u>(122,709)</u>                         | <u>280,196</u>                                       |
| Remeasurement                                                         |                                                                    |                                          |                                                      |
| Return on plan assets (excluding<br>amounts included in net interest) | -                                                                  | (16,589)                                 | (16,589)                                             |
| Actuarial gain arising from changes in<br>financial assumptions       | (8,643)                                                            | -                                        | (8,643)                                              |
| Actuarial loss arising from experience<br>adjustments                 | 302,499                                                            | -                                        | 302,499                                              |
| Actuarial loss arising from changes in<br>demographic assumptions     | 8,190                                                              | -                                        | 8,190                                                |
| Actuarial loss arising from changes in<br>other assumptions           | <u>22,723</u>                                                      | <u>-</u>                                 | <u>22,723</u>                                        |
| Recognized in other comprehensive<br>income                           | <u>324,769</u>                                                     | <u>(16,589)</u>                          | <u>308,180</u>                                       |

(Continued)

|                                                                       | <b>Present Value of<br/>the Defined<br/>Benefit<br/>Obligation</b> | <b>Fair Value of<br/>the Plan Assets</b> | <b>Net Defined<br/>Benefit Liability<br/>(Asset)</b> |
|-----------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------|------------------------------------------------------|
|                                                                       | <b>NT\$</b>                                                        | <b>NT\$</b>                              | <b>NT\$</b>                                          |
| Contributions from the employer                                       | \$ -                                                               | \$ (364,237)                             | \$ (364,237)                                         |
| Benefits paid from the pension fund                                   | (541,989)                                                          | 541,989                                  | -                                                    |
| Benefits paid from the Group                                          | (295,953)                                                          | -                                        | (295,953)                                            |
| Liabilities assumed in a business<br>combination                      | 2,522,805                                                          | (1,210,524)                              | 1,312,281                                            |
| Exchange differences on foreign plans                                 | <u>(26,036)</u>                                                    | <u>21,320</u>                            | <u>(4,716)</u>                                       |
| Balance at December 31, 2018                                          | <u>\$ 10,297,139</u>                                               | <u>\$ (5,492,123)</u>                    | <u>\$ 4,805,016</u>                                  |
| Balance at January 1, 2017                                            | <u>\$ 8,389,884</u>                                                | <u>\$ (4,417,367)</u>                    | <u>\$ 3,972,517</u>                                  |
| Service cost                                                          |                                                                    |                                          |                                                      |
| Current service cost                                                  | 278,412                                                            | -                                        | 278,412                                              |
| Past service cost and gain on<br>settlements                          | (68,979)                                                           | -                                        | (68,979)                                             |
| Net interest expense (income)                                         | <u>157,404</u>                                                     | <u>(103,741)</u>                         | <u>53,663</u>                                        |
| Recognized in profit or loss                                          | <u>366,837</u>                                                     | <u>(103,741)</u>                         | <u>263,096</u>                                       |
| Remeasurement                                                         |                                                                    |                                          |                                                      |
| Return on plan assets (excluding<br>amounts included in net interest) | -                                                                  | 52,124                                   | 52,124                                               |
| Actuarial loss arising from changes in<br>financial assumptions       | 56,860                                                             | -                                        | 56,860                                               |
| Actuarial gain arising from experience<br>adjustments                 | (315,090)                                                          | -                                        | (315,090)                                            |
| Actuarial loss arising from changes in<br>demographic assumptions     | <u>762</u>                                                         | <u>-</u>                                 | <u>762</u>                                           |
| Recognized in other comprehensive<br>income                           | <u>(257,468)</u>                                                   | <u>52,124</u>                            | <u>(205,344)</u>                                     |
| Contributions from the employer                                       | -                                                                  | (484,790)                                | (484,790)                                            |
| Benefits paid from the pension fund                                   | (690,830)                                                          | 690,830                                  | -                                                    |
| Benefits paid from the Group                                          | (96,575)                                                           | -                                        | (96,575)                                             |
| Exchange differences on foreign plans                                 | <u>198,790</u>                                                     | <u>(78,429)</u>                          | <u>120,361</u>                                       |
| Balance at December 31, 2017                                          | <u>\$ 7,910,638</u>                                                | <u>\$ (4,341,373)</u>                    | <u>\$ 3,569,265</u><br>(Concluded)                   |

5) The fair value of the plan assets by major categories at each balance sheet date was as follows:

|                    | <b>December 31</b>  |                     |
|--------------------|---------------------|---------------------|
|                    | <b>2018</b>         | <b>2017</b>         |
|                    | <b>NT\$</b>         | <b>NT\$</b>         |
| Cash               | \$ 2,340,903        | \$ 2,317,764        |
| Debt instruments   | 902,886             | 691,619             |
| Equity instruments | 2,164,895           | 1,254,109           |
| Others             | <u>83,439</u>       | <u>77,881</u>       |
| Total              | <u>\$ 5,492,123</u> | <u>\$ 4,341,373</u> |

- 6) Through the defined benefit plans under the Labor Standards Law of the R.O.C., the Group in Taiwan are exposed to the following risks:

a) Investment risk

The plan assets are invested in equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the Bureau or under the mandated management. However, in accordance with relevant regulations, the return generated by plan assets should not be below the interest rate for a 2-year time deposit with local banks.

b) Interest risk

A decrease in the government bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the plan's debt investments.

c) Salary risk

The present value of the defined benefit obligation is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the present value of the defined benefit obligation.

- 7) The management of ASE Korea is responsible for the administration of the fund and determination of the investment strategies according to related local regulations. ASE Korea is responsible for the shortfall between the fund and the defined benefit obligation. The plan assets are invested in the certificates of deposits.

- 8) The present value of the defined benefit obligation and the related current service cost and past service cost were measured using the Projected Unit Credit Method. Except the pension plans for executive managers, the key assumptions used for the actuarial valuations were as follow:

|                                       | <b>December 31</b> |             |
|---------------------------------------|--------------------|-------------|
|                                       | <b>2018</b>        | <b>2017</b> |
| Discount rates (%)                    | 0.05-3.02          | 0.06-3.85   |
| Expected rates of salary increase (%) | 1.75-4.06          | 2.00-4.42   |

The sensitivity analysis below has been determined based on reasonably possible changes of the respective assumptions occurring at each balance sheet date, while holding all other assumptions constant.

|                                   | <b>December 31</b> |              |
|-----------------------------------|--------------------|--------------|
|                                   | <b>2018</b>        | <b>2017</b>  |
|                                   | <b>NT\$</b>        | <b>NT\$</b>  |
| Discount Rate                     |                    |              |
| 0.5% higher                       | \$ (555,181)       | \$ (455,158) |
| 0.5% lower                        | \$ 603,089         | \$ 461,891   |
| Expected rates of salary increase |                    |              |
| 0.5% higher                       | \$ 591,712         | \$ 453,792   |
| 0.5% lower                        | \$ (547,522)       | \$ (444,493) |

The sensitivity analysis presented above may not be representative of the actual change in the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

9) Maturity analysis of undiscounted pension benefit

|                                              | <b>December 31</b>   |                      |
|----------------------------------------------|----------------------|----------------------|
|                                              | <b>2018</b>          | <b>2017</b>          |
|                                              | <b>NT\$</b>          | <b>NT\$</b>          |
| No later than 1 year                         | \$ 368,592           | \$ 291,152           |
| Later than 1 year but not later than 5 years | 1,886,738            | 1,551,496            |
| Later than 5 years                           | <u>13,322,695</u>    | <u>16,507,747</u>    |
|                                              | <u>\$ 15,578,025</u> | <u>\$ 18,350,395</u> |

The Group expected to make contributions of NT\$484,247 thousand and NT\$272,911 thousand to the defined benefit plans in the next year starting from January 1, 2019 and 2018, respectively.

As of December 31, 2018 and 2017, the average duration of the defined benefit obligation excluding those for executive managers of the Group was 9 to 15 years and 8 to 14 years, respectively.

## 25. EQUITY

a. Share capital

Ordinary shares

|                                                       | <b>December 31</b>   |                       |
|-------------------------------------------------------|----------------------|-----------------------|
|                                                       | <b>2018</b>          | <b>2017</b>           |
| Numbers of shares authorized (in thousands)           | <u>5,000,000</u>     | <u>10,000,000</u>     |
| Numbers of shares reserved (in thousands)             |                      |                       |
| Employee share options                                | <u>400,000</u>       | <u>800,000</u>        |
| Shares capital authorized                             | <u>\$ 50,000,000</u> | <u>\$ 100,000,000</u> |
| Shares capital reserved                               |                      |                       |
| Employee share options                                | <u>\$ 4,000,000</u>  | <u>\$ 8,000,000</u>   |
| Number of shares issued and fully paid (in thousands) | <u>4,321,714</u>     | <u>8,738,079</u>      |

As disclosed in Note 1, the Company acquired 100% shareholdings of ASE through share exchange at an exchange ratio of 1 ordinary share of ASE for 0.5 ordinary share of the Company. The holders of issued ordinary shares with \$10 per share are entitled the right to vote and receive dividends, except the shares held by the Group's subsidiaries which are not entitled the right to vote. Before the share exchange, 500,000 thousand ordinary shares included in ASE's authorized shares as of December 31, 2017 were not yet required to complete the share registration process.

In December 2016, ASE's board of directors approved the issuance of 300,000 thousand ordinary shares for cash capital increase at NT\$34.3 per share. ASE has completed the registration formalities for the cash capital increase.

As disclosed in Note 22, there were 424,258 thousand ordinary shares issued under the conversion of Bonds in 2017. The record dates of 323,094 thousand and 101,164 thousand ordinary shares were

October 13, 2017 and July 13, 2017, respectively. ASE has completed the registration formalities.

### American Depositary Receipts

ASE issued ADSs and each ADS represents 5 ordinary shares of ASE. On April 30, 2018, ASE's ADSs were fully exchanged to the Company's ADSs and each of the Company's ADS represents 2 ordinary shares of the Company. As of December 31, 2018 and 2017, 140,042 thousand and 115,261 thousand ADSs were outstanding and represented approximately 280,085 thousand ordinary shares of the Company and 576,305 thousand ordinary shares of ASE, respectively.

#### b. Capital surplus

|                                                                                                                                   | <b>December 31</b>    |                      |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|
|                                                                                                                                   | <b>2018</b>           | <b>2017</b>          |
|                                                                                                                                   | <b>NT\$</b>           | <b>NT\$</b>          |
| <u>May be used to offset a deficit,<br/>distributed as cash dividends,<br/>or transferred to share capital (1)</u>                |                       |                      |
| Issuance of ordinary shares                                                                                                       | \$ 12,906,401         | \$ 21,553,853        |
| Merger by share exchange                                                                                                          | 117,693,658           | -                    |
| Conversion of bonds payable                                                                                                       | -                     | 1,930,066            |
| Difference between consideration and the carrying amount of the<br>subsidiaries' net assets during actual disposal or acquisition | <u>6,034,102</u>      | <u>7,176,958</u>     |
|                                                                                                                                   | <u>136,634,161</u>    | <u>30,660,877</u>    |
| <u>May be used to offset a deficit only</u>                                                                                       |                       |                      |
| Changes in percentage of ownership interest in subsidiaries (2)                                                                   | 3,725,885             | 6,083,444            |
| Treasury share transactions                                                                                                       | 182,354               | 1,151,345            |
| Exercised employee share options                                                                                                  | 1,366,480             | 1,089,178            |
| Expired share options (Notes 22 and 29)                                                                                           | 645,978               | 223,454              |
| Share of changes in capital surplus of associates                                                                                 | 87,136                | 83,733               |
| Dividends that the claim period has elapsed and unclaimed by<br>shareholders                                                      | <u>872</u>            | <u>-</u>             |
|                                                                                                                                   | <u>6,008,705</u>      | <u>8,631,154</u>     |
| <u>May not be used for any purpose</u>                                                                                            |                       |                      |
| Employee share options                                                                                                            | 583,542               | 960,888              |
| Equity component of convertible bonds                                                                                             | -                     | 214,022              |
| Others (3)                                                                                                                        | <u>48,805</u>         | <u>155,936</u>       |
|                                                                                                                                   | <u>632,347</u>        | <u>1,330,846</u>     |
|                                                                                                                                   | <u>\$ 143,275,213</u> | <u>\$ 40,622,877</u> |

- 1) Such capital surplus may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or transferred to share capital (limited to a certain percentage of the Company's capital surplus and once a year).
- 2) Such capital surplus arises from the effect of changes in ownership interest in a subsidiary resulted from equity transactions other than actual disposal or acquisition, or from changes in capital surplus of subsidiaries accounted for using the equity method.
- 3) Such capital surplus represents the excess of the carrying amount of related accounts over the par

value due to employee share options exercised and the Company has not completed registration formalities.

As disclosed in Note 1, share exchange between the Company and ASE was deemed as an organization restructure under common control and the Company, in accordance with the Interpretation 2011-390 issued by the Accounting Research and Development Foundation, R.O.C., recorded the same amounts of equity which were related to ASE's assets and liabilities (the "continued equity") and then recognized capital surplus arising from merger by share exchange in the amount of the excess of ASE's total equity over the Company's share capital and the continued equity.

In addition, the Company's special shareholders' meeting held in June 2018 resolved to distribute cash in NT\$10,795,980 thousand from capital surplus arising from issuance of ordinary shares.

c. Retained earnings and dividend policy

The Articles of Incorporation of the Company (the "Articles") provides that annual net income shall be distributed in the following order:

- 1) Replenishment of deficits;
- 2) 10.0% as legal reserve;
- 3) Special reserve appropriated or reversed in accordance with laws or regulations set forth by the authorities concerned;
- 4) Addition or deduction of realized gains or losses on equity instruments at fair value through other comprehensive income.

The Articles also provides the policy of the employees' compensation and remuneration of directors, refer to employees' compensation and the remuneration of directors in Note 26(g).

The Company is currently in the mature growth stage. To meet the capital needs for business development now and in the future and satisfy the shareholders' demand for cash inflows, the Company shall use residual dividend policy to distribute dividends, of which the cash dividend is not lower than 30% of the total dividend distribution, with the remainder to be distributed in shares. A distribution plan is also to be made by the board of directors and passed for resolution in the shareholders' meeting.

Appropriation of earnings to legal reserve shall be made until the legal reserve equals the Company's share capital. Legal reserve may be used to offset deficits. If the Company has no deficit and the legal reserve has exceeded 25% of the Company's share capital, the excess may be transferred to capital or distributed in cash.

Items referred to under Rule No. 1010012865 and Rule No. 1010047490 issued by the FSC and in the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs" should be appropriated to or reversed from a special reserve by the Company.



d. Others equity items

1) Exchange differences on translating foreign operations

|                                                                                | <b>For the Year Ended December 31</b> |                              |
|--------------------------------------------------------------------------------|---------------------------------------|------------------------------|
|                                                                                | <b>2018</b>                           | <b>2017</b>                  |
|                                                                                | <b>NT\$</b>                           | <b>NT\$</b>                  |
| Balance at January 1                                                           | \$ (6,732,760)                        | \$ (1,642,724)               |
| Exchange differences on translating foreign operations                         | 426,186                               | (4,952,815)                  |
| Share from associates and joint venture accounted for using the equity method  | 136,608                               | (137,221)                    |
| Disposal of associates and joint venture accounted for using the equity method | <u>282,291</u>                        | <u>-</u>                     |
| Balance at December 31                                                         | <u><u>\$ (5,887,675)</u></u>          | <u><u>\$ (6,732,760)</u></u> |

2) Unrealized gain (loss) on available-for-sale financial assets

|                                                                                                     | <b>For the Year<br/>Ended December<br/>31, 2017</b> |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|                                                                                                     | <b>NT\$</b>                                         |
| Balance at January 1                                                                                | \$ (240,850)                                        |
| Unrealized gain arising on revaluation of available-for-sale financial assets                       | 169,585                                             |
| Cumulative loss reclassified to profit or loss on impairment of available-for-sale financial assets | 50,206                                              |
| Cumulative gain reclassified to profit or loss on disposal of available-for-sale financial assets   | (1,517)                                             |
| Share from associates and joint venture accounted for using the equity method                       | <u>439,198</u>                                      |
| Balance at December 31                                                                              | <u><u>\$ 416,622</u></u>                            |

3) Unrealized gain (loss) on financial assets at FVTOCI

|                                                                               | <b>For the Year<br/>Ended December<br/>31, 2018</b> |
|-------------------------------------------------------------------------------|-----------------------------------------------------|
|                                                                               | <b>NT\$</b>                                         |
| Balance at January 1 per IAS 39                                               | \$ 416,622                                          |
| Adjustment on initial application of IFRS 9 (Note 3)                          | <u>(281,105)</u>                                    |
| Balance at January 1 per IFRS 9                                               | 135,517                                             |
| Unrealized gain (loss) recognized during the year                             |                                                     |
| Debt instruments                                                              | (63,076)                                            |
| Equity instruments                                                            | (398,513)                                           |
| Share from associates and joint venture accounted for using the equity method | (555,271)                                           |
|                                                                               | (Continued)                                         |

|                                                                                     | <b>For the Year<br/>Ended December<br/>31, 2018</b> |
|-------------------------------------------------------------------------------------|-----------------------------------------------------|
|                                                                                     | <u>NT\$</u>                                         |
| Realized gain recognized during the year                                            |                                                     |
| Disposal of equity instruments and transferred cumulative gain to retained earnings | \$ (1,518)                                          |
| Disposal of associates and joint venture accounted for using the equity method      | (133,364)                                           |
| Share from associates and joint venture accounted for using the equity method       | <u>1,118</u>                                        |
| Balance at December 31                                                              | <u><u>\$ (1,015,107)</u></u><br>(Concluded)         |

e. Treasury shares (in thousand shares)

|                                                                                                          | <u><b>Beginning<br/>Balance</b></u> | <u><b>Addition</b></u> | <u><b>Decrease</b></u>  | <u><b>Ending<br/>Balance</b></u> |
|----------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------|-------------------------|----------------------------------|
| <u>2018</u>                                                                                              |                                     |                        |                         |                                  |
| Shares held by subsidiaries                                                                              | 145,883                             | -                      | (72,942)                | 72,941                           |
| Shares reserved for bonds conversion                                                                     | 120,000                             | -                      | (120,000)               | -                                |
| Shares repurchased from dissenting shareholders in accordance with Business Mergers and Acquisitions Act | <u>-</u>                            | <u>1,852</u>           | <u>(1,852)</u>          | <u>-</u>                         |
|                                                                                                          | <u><u>265,883</u></u>               | <u><u>1,852</u></u>    | <u><u>(194,794)</u></u> | <u><u>72,941</u></u>             |
| <u>2017</u>                                                                                              |                                     |                        |                         |                                  |
| Shares held by subsidiaries                                                                              | 145,883                             | -                      | -                       | 145,883                          |
| Shares reserved for bonds conversion                                                                     | <u>120,000</u>                      | <u>-</u>               | <u>-</u>                | <u>120,000</u>                   |
|                                                                                                          | <u><u>265,883</u></u>               | <u><u>-</u></u>        | <u><u>-</u></u>         | <u><u>265,883</u></u>            |

The Company or ASE's shares held by its subsidiaries at each balance sheet date were as follows:

|                          | <u><b>Shares<br/>Held By<br/>Subsidiaries<br/>(in thousand<br/>shares)</b></u> | <u><b>Carrying<br/>Amount<br/>NT\$</b></u> | <u><b>Fair Value<br/>NT\$</b></u> |
|--------------------------|--------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------|
| <u>December 31, 2018</u> |                                                                                |                                            |                                   |
| ASE Test                 | 44,100                                                                         | \$ 1,380,721                               | \$ 2,571,044                      |
| J&R Holding              | 23,352                                                                         | 381,709                                    | 1,361,415                         |
|                          |                                                                                |                                            | (Continued)                       |

|                               | <b>Shares<br/>Held By<br/>Subsidiaries<br/>(in thousand<br/>shares)</b> | <b>Carrying<br/>Amount<br/>NT\$</b> | <b>Fair Value<br/>NT\$</b> |
|-------------------------------|-------------------------------------------------------------------------|-------------------------------------|----------------------------|
| ASE Test, Inc.                | <u>5,489</u>                                                            | <u>\$ 196,677</u>                   | <u>\$ 320,031</u>          |
|                               | <u>72,941</u>                                                           | <u>\$ 1,959,107</u>                 | <u>\$ 4,252,490</u>        |
| <hr/> December 31, 2017 <hr/> |                                                                         |                                     |                            |
| ASE Test                      | 88,200                                                                  | \$ 1,380,721                        | \$ 3,364,848               |
| J&R Holding                   | 46,704                                                                  | 381,709                             | 1,781,749                  |
| ASE Test, Inc.                | <u>10,979</u>                                                           | <u>196,677</u>                      | <u>418,840</u>             |
|                               | <u>145,883</u>                                                          | <u>\$ 1,959,107</u>                 | <u>\$ 5,565,437</u>        |
|                               |                                                                         |                                     | (Concluded)                |

Fair values of the Company's shares held by subsidiaries are based on the closing price from an available published price quotation, which is Level 1 input in terms of IFRS 13, at the balance sheet dates.

In March 2018, ASE's board of directors approved, in accordance with Business Mergers and Acquisitions Act, to repurchase ASE's 1,852 thousand ordinary shares at NT\$38.5 per share held by the shareholders dissenting on the share exchange transaction which has been approved by both of ASE and SPIL's special shareholders' meetings on February 12, 2018. In addition, ASE's board of directors approved a capital reduction in April 2018 to cancel ASE's 121,852 thousand treasury shares and the record date was April 9, 2018. ASE has completed the registration formalities before April 30, 2018.

ASE issued ordinary shares in connection with its merger with its subsidiaries. The shares held by its subsidiaries were reclassified to treasury shares on the proportion owned by ASE. As disclosed in Note 1, ASE's ordinary shares held by subsidiaries were exchanged to the Company's ordinary shares on April 30, 2018 in accordance with the joint share exchange agreement.

The subsidiaries holding the aforementioned treasury shares retain shareholders' rights except the rights to participate in cash capital increase by cash and voting.

f. Non-controlling interests

|                                                        | <b>2018<br/>NT\$</b> | <b>2017<br/>NT\$</b> |
|--------------------------------------------------------|----------------------|----------------------|
| Balance at January 1                                   | \$ 13,199,937        | \$ 12,008,753        |
| Adjustment on initial application of IFRS 15 (Note 3)  | <u>5,183</u>         | <u>-</u>             |
| Balance at January 1 per IFRS 15                       | 13,205,120           | 12,008,753           |
| Share of profit for the year                           | 1,201,483            | 1,679,547            |
| Other comprehensive income (loss)                      |                      |                      |
| Exchange difference on translating foreign operations  | (198,365)            | (334,919)            |
| Unrealized gain on available-for-sale financial assets | -                    | 5,762                |
| Unrealized loss on equity instruments at FVTOCI        | (23,928)             | -                    |
| Remeasurement on defined benefit plans                 | (30,079)             | (13,724)             |
|                                                        |                      | (Continued)          |

|                                                                                                         | <b>2018</b>          | <b>2017</b>                         |
|---------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------|
|                                                                                                         | <b>NT\$</b>          | <b>NT\$</b>                         |
| Non-controlling interests arising from acquisition of subsidiaries (Note 30)                            | \$ 3,582,866         | \$ -                                |
| Acquisition of non-controlling interests in subsidiaries                                                | (2,492,915)          | -                                   |
| Partial disposal of subsidiaries (Note 32)                                                              | 1,693,064            | (3,055)                             |
| Subsidiaries' buy back of their own outstanding ordinary shares (Note 32)                               | (801,884)            | -                                   |
| Non-controlling interest relating to outstanding vested employee share options granted by subsidiaries  | 1,936,643            | 263,213                             |
| Non-controlling interest relating to outstanding expired employee share options granted by subsidiaries | -                    | (159,200)                           |
| Cash dividends to non-controlling interests                                                             | <u>(424,815)</u>     | <u>(246,440)</u>                    |
| Balance at December 31                                                                                  | <u>\$ 17,647,190</u> | <u>\$ 13,199,937</u><br>(Concluded) |

## 26. PROFIT BEFORE INCOME TAX

### a. Other income

|                    | <b>For the Year Ended December 31</b> |                   |
|--------------------|---------------------------------------|-------------------|
|                    | <b>2018</b>                           | <b>2017</b>       |
|                    | <b>NT\$</b>                           | <b>NT\$</b>       |
| Government subsidy | \$ 435,950                            | \$ 341,844        |
| Interest income    | 466,211                               | 306,871           |
| Rental income      | 182,411                               | 131,570           |
| Dividends income   | <u>190,397</u>                        | <u>59,039</u>     |
|                    | <u>\$ 1,274,969</u>                   | <u>\$ 839,324</u> |

### b. Other gains, net

|                                                                                      | <b>For the Year Ended December 31</b> |                     |
|--------------------------------------------------------------------------------------|---------------------------------------|---------------------|
|                                                                                      | <b>2018</b>                           | <b>2017</b>         |
|                                                                                      | <b>NT\$</b>                           | <b>NT\$</b>         |
| Gain on remeasurement of investments accounted for using the equity method (Note 15) | \$ 7,571,882                          | \$ -                |
| Net gains on financial assets mandatorily at FVTPL                                   | 3,388,485                             | -                   |
| Gain on disposal of subsidiaries (Note 31)                                           | -                                     | 5,589,457           |
| Net losses arising on financial instruments held for trading                         | (1,398,995)                           | (3,111,253)         |
| Net gains on financial assets designated as at FVTPL                                 | -                                     | 327,351             |
| Net foreign exchange gains (losses)                                                  | (1,015,615)                           | 3,502,586           |
| Impairment losses                                                                    | (654,081)                             | (764,881)           |
| Gain (loss) on disposal of property, plant and equipment                             | (56,902)                              | 348,070             |
| Others                                                                               | <u>379,145</u>                        | <u>345,109</u>      |
|                                                                                      | <u>\$ 8,213,919</u>                   | <u>\$ 6,236,439</u> |

c. Finance costs

|                                                                             | <b>For the Year Ended December 31</b> |                     |
|-----------------------------------------------------------------------------|---------------------------------------|---------------------|
|                                                                             | <b>2018</b>                           | <b>2017</b>         |
|                                                                             | <b>NT\$</b>                           | <b>NT\$</b>         |
| Total interest expense for financial liabilities measured at amortized cost | \$ 3,597,932                          | \$ 2,016,298        |
| Less: Amounts included in the cost of qualifying assets                     |                                       |                     |
| Inventories related to real estate business                                 | (11,648)                              | (190,137)           |
| Property, plant and equipment                                               | (50,309)                              | (51,262)            |
| Investment properties                                                       | <u>(89)</u>                           | <u>(13)</u>         |
|                                                                             | 3,535,886                             | 1,774,886           |
| Other finance costs                                                         | <u>32,355</u>                         | <u>24,608</u>       |
|                                                                             | <u>\$ 3,568,241</u>                   | <u>\$ 1,799,494</u> |

Information relating to the capitalized borrowing costs was as follows:

|                                                 | <b>For the Year Ended December 31</b> |             |
|-------------------------------------------------|---------------------------------------|-------------|
|                                                 | <b>2018</b>                           | <b>2017</b> |
| Annual interest capitalization rates            |                                       |             |
| Inventories related to real estate business (%) | 4.35                                  | 4.35-5.39   |
| Property, plant and equipment (%)               | 1.84-4.52                             | 1.26-5.49   |
| Investment properties (%)                       | 1.84-2.23                             | 1.26-1.97   |

d. Depreciation and amortization

|                                     | <b>For the Year Ended December 31</b> |                      |
|-------------------------------------|---------------------------------------|----------------------|
|                                     | <b>2018</b>                           | <b>2017</b>          |
|                                     | <b>NT\$</b>                           | <b>NT\$</b>          |
| Property, plant and equipment       | \$ 39,893,786                         | \$ 28,625,287        |
| Investment properties               | 392,667                               | 122,231              |
| Intangible assets                   | <u>2,402,450</u>                      | <u>457,666</u>       |
| Total                               | <u>\$ 42,688,903</u>                  | <u>\$ 29,205,184</u> |
| Summary of depreciation by function |                                       |                      |
| Operating costs                     | \$ 37,903,050                         | \$ 26,731,714        |
| Operating expenses                  | <u>2,383,403</u>                      | <u>2,015,804</u>     |
|                                     | <u>\$ 40,286,453</u>                  | <u>\$ 28,747,518</u> |
| Summary of amortization by function |                                       |                      |
| Operating costs                     | \$ 1,394,664                          | \$ 140,175           |
| Operating expenses                  | <u>1,007,786</u>                      | <u>317,491</u>       |
|                                     | <u>\$ 2,402,450</u>                   | <u>\$ 457,666</u>    |

e. Operating expenses directly related to investment properties

|                                                                                 | <b>For the Year Ended December 31</b> |                   |
|---------------------------------------------------------------------------------|---------------------------------------|-------------------|
|                                                                                 | <b>2018</b>                           | <b>2017</b>       |
|                                                                                 | <b>NT\$</b>                           | <b>NT\$</b>       |
| Direct operating expenses of investment properties that generated rental income | <u>\$ 1,276,751</u>                   | <u>\$ 465,458</u> |

f. Employee benefits expense

|                                                  | <b>For the Year Ended December 31</b> |                      |
|--------------------------------------------------|---------------------------------------|----------------------|
|                                                  | <b>2018</b>                           | <b>2017</b>          |
|                                                  | <b>NT\$</b>                           | <b>NT\$</b>          |
| Post-employment benefits                         |                                       |                      |
| Defined contribution plans                       | \$ 2,965,054                          | \$ 2,340,826         |
| Defined benefit plans                            | <u>291,333</u>                        | <u>266,266</u>       |
|                                                  | 3,256,387                             | 2,607,092            |
| Equity-settled share-based payments              | 215,648                               | 438,765              |
| Other employee benefits                          | <u>63,940,430</u>                     | <u>51,043,198</u>    |
|                                                  | <u>\$ 67,412,465</u>                  | <u>\$ 54,089,055</u> |
| Summary of employee benefits expense by function |                                       |                      |
| Operating costs                                  | \$ 45,363,170                         | \$ 35,978,402        |
| Operating expenses                               | <u>22,049,295</u>                     | <u>18,110,653</u>    |
|                                                  | <u>\$ 67,412,465</u>                  | <u>\$ 54,089,055</u> |

g. Employees' compensation and the remuneration of directors

The Articles stipulates to distribute employees' compensation and remuneration of directors at the rates in 0.01%-1.00% and no higher than 0.75%, respectively, of net profit before income tax, employees' compensation and remuneration of directors. For the period from April 30, 2018 to December 31, 2018, the employees' compensation and the remuneration of directors were NT\$45,430 thousand and NT\$34,073 thousand which were accrued based on 0.20% and 0.15%, respectively, of net profit before income tax, employees' compensation and remuneration to directors.

If there is a change in the proposed amounts after the consolidated financial statement authorized for issue, the differences are recorded as a change in accounting estimate and will be adjusted in the following year.

## 27. INCOME TAX

a. Income tax recognized in profit or loss

The major components of income tax expense were as follows:

|                                                 | <b>For the Year Ended December 31</b> |                     |
|-------------------------------------------------|---------------------------------------|---------------------|
|                                                 | <b>2018</b>                           | <b>2017</b>         |
|                                                 | <b>NT\$</b>                           | <b>NT\$</b>         |
| Current income tax                              |                                       |                     |
| In respect of the current year                  | \$ 5,207,309                          | \$ 4,979,766        |
| Income tax on unappropriated earnings           | 47,670                                | 814,282             |
| Changes in estimate for prior years             | <u>(103,822)</u>                      | <u>(88,162)</u>     |
|                                                 | <u>5,151,157</u>                      | <u>5,705,886</u>    |
| Deferred income tax                             |                                       |                     |
| In respect of the current year                  | (227,327)                             | 534,472             |
| Effect of tax rate changes                      | 657,346                               | -                   |
| Changes in estimate for prior years             | 5,696                                 | 52,872              |
| Effect of foreign currency exchange differences | <u>(3,273)</u>                        | <u>(31,698)</u>     |
|                                                 | <u>432,442</u>                        | <u>555,646</u>      |
| Income tax expense recognized in profit or loss | <u>\$ 5,583,599</u>                   | <u>\$ 6,261,532</u> |

A reconciliation of income tax expense calculated at the statutory rates and income tax expense recognized in profit or loss was as follows:

|                                                          | <b>For the Year Ended December 31</b> |                      |
|----------------------------------------------------------|---------------------------------------|----------------------|
|                                                          | <b>2018</b>                           | <b>2017</b>          |
|                                                          | <b>NT\$</b>                           | <b>NT\$</b>          |
| Profit before income tax                                 | <u>\$ 32,047,438</u>                  | <u>\$ 30,928,898</u> |
| Income tax expense calculated at the statutory rates     | \$ 13,562,551                         | \$ 10,874,898        |
| Nontaxable expense in determining taxable income         | 331,067                               | 499,315              |
| Tax-exempt income                                        | (2,515,453)                           | (623,566)            |
| Additional income tax on unappropriated earnings         | 47,670                                | 814,282              |
| Loss carry-forward and income tax credits currently used | (971,124)                             | (1,124,043)          |
| Remeasurement of deferred income tax assets, net         | (4,776,271)                           | (4,131,473)          |
| Changes in estimate for prior years                      | (103,822)                             | (88,162)             |
| Withholding tax                                          | <u>8,981</u>                          | <u>40,281</u>        |
| Income tax expense recognized in profit or loss          | <u>\$ 5,583,599</u>                   | <u>\$ 6,261,532</u>  |

For the years ended December 31, 2017, the Group applied a tax rate of 17% for resident entities subject to the Income Tax Law of the R.O.C.. In February 2018, the Income Tax Law of the R.O.C. was amended and the corporate income tax rate was adjusted from 17% to 20% effective in 2018. In addition, the rate of the corporate surtax applicable to 2018 unappropriated earnings is reduced from 10% to 5%. The subsidiaries located in China applied tax rate of 25%. For other jurisdictions, the Group measures taxes by using the applicable tax rate for each individual jurisdiction.

b. Income tax recognized directly in equity

|                                   | <b>For the Year Ended December 31</b> |               |
|-----------------------------------|---------------------------------------|---------------|
|                                   | <b>2018</b>                           | <b>2017</b>   |
|                                   | <b>NT\$</b>                           | <b>NT\$</b>   |
| Deferred income tax               |                                       |               |
| Related to employee share options | <u>\$ (1,099)</u>                     | <u>\$ 262</u> |

c. Income tax recognized in other comprehensive income

|                                                     | <b>For the Year Ended December 31</b> |                    |
|-----------------------------------------------------|---------------------------------------|--------------------|
|                                                     | <b>2018</b>                           | <b>2017</b>        |
|                                                     | <b>NT\$</b>                           | <b>NT\$</b>        |
| Deferred income tax                                 |                                       |                    |
| Related to remeasurement of defined benefit plans   | \$ 55,346                             | \$ (51,217)        |
| Effect of tax rate changes                          | <u>70,755</u>                         | <u>-</u>           |
| Income tax recognized in other comprehensive income | <u>\$ 126,101</u>                     | <u>\$ (51,217)</u> |

d. Current tax assets and liabilities

|                         | <b>December 31</b>  |                     |
|-------------------------|---------------------|---------------------|
|                         | <b>2018</b>         | <b>2017</b>         |
|                         | <b>NT\$</b>         | <b>NT\$</b>         |
| Current tax assets      |                     |                     |
| Tax refund receivable   | \$ 50,456           | \$ 28,458           |
| Prepaid income tax      | <u>473,807</u>      | <u>232,084</u>      |
|                         | <u>\$ 524,263</u>   | <u>\$ 260,542</u>   |
| Current tax liabilities |                     |                     |
| Income tax payable      | <u>\$ 4,447,790</u> | <u>\$ 4,863,549</u> |

e. Deferred tax assets and liabilities

The Group offset certain deferred tax assets and deferred tax liabilities which met the offset criteria.

The movements of deferred tax assets and deferred tax liabilities were as follows:

For the year ended December 31, 2018

| <b>Deferred Tax Assets<br/>(Liabilities)</b> | <b>Balance at<br/>January 1</b> | <b>Adjustment<br/>on initial<br/>application of<br/>IFRS 15</b> | <b>Recognized in<br/>Profit or Loss</b> | <b>Recognized in<br/>Other<br/>Comprehensive<br/>Income</b> | <b>Recognized in<br/>Equity</b> | <b>Exchange<br/>Differences</b> | <b>Acquisitions<br/>through<br/>Business<br/>Combinations</b> | <b>Balance at<br/>December 31</b> |
|----------------------------------------------|---------------------------------|-----------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------|---------------------------------|---------------------------------|---------------------------------------------------------------|-----------------------------------|
|                                              | <b>NT\$</b>                     | <b>NT\$</b>                                                     | <b>NT\$</b>                             | <b>NT\$</b>                                                 | <b>NT\$</b>                     | <b>NT\$</b>                     | <b>NT\$</b>                                                   | <b>NT\$</b>                       |
| Temporary differences                        |                                 |                                                                 |                                         |                                                             |                                 |                                 |                                                               |                                   |
| Property, plant and equipment                | \$(3,879,066)                   | \$ -                                                            | \$ (600,229)                            | \$ -                                                        | \$ -                            | \$ (21,146)                     | \$ (45,873)                                                   | \$(4,546,314)                     |
| Defined benefit obligation                   | 780,240                         | -                                                               | (131,687)                               | 126,101                                                     | -                               | 27,884                          | 262,286                                                       | 1,064,824                         |
| FVTPL financial instruments                  | (104,903)                       | -                                                               | 284,659                                 | -                                                           | -                               | (137)                           | 27,402                                                        | 207,021                           |
| Others                                       | <u>1,028,409</u>                | <u>(97,358)</u>                                                 | <u>(26,147)</u>                         | <u>-</u>                                                    | <u>(1,099)</u>                  | <u>74,327</u>                   | <u>294,540</u>                                                | <u>1,272,672</u>                  |
|                                              | (2,175,320)                     | (97,358)                                                        | (473,404)                               | 126,101                                                     | (1,099)                         | 80,928                          | 538,355                                                       | (2,001,797)                       |
| Loss carry-forward                           | 681,441                         | -                                                               | (50,059)                                | -                                                           | -                               | 28,293                          | 12,600                                                        | 672,275                           |
| Investment credits                           | <u>534,213</u>                  | <u>-</u>                                                        | <u>91,021</u>                           | <u>-</u>                                                    | <u>-</u>                        | <u>5,932</u>                    | <u>-</u>                                                      | <u>631,166</u>                    |
|                                              | <u>\$ (959,666)</u>             | <u>\$ (97,358)</u>                                              | <u>\$ (432,442)</u>                     | <u>\$ 126,101</u>                                           | <u>\$ (1,099)</u>               | <u>\$ 115,153</u>               | <u>\$ 550,955</u>                                             | <u>\$ (698,356)</u>               |



For the year ended December 31, 2017

| Deferred Tax Assets<br>(Liabilities) | Balance at<br>January 1 | Recognized in<br>Profit or Loss | Recognized in<br>Other<br>Comprehensive<br>Income | Recognized in<br>Equity | Exchange<br>Differences | Balance at<br>December 31 |
|--------------------------------------|-------------------------|---------------------------------|---------------------------------------------------|-------------------------|-------------------------|---------------------------|
|                                      | NT\$                    | NT\$                            | NT\$                                              | NT\$                    | NT\$                    | NT\$                      |
| Temporary differences                |                         |                                 |                                                   |                         |                         |                           |
| Property, plant and equipment        | \$ (3,758,847)          | \$ (101,576)                    | \$ -                                              | \$ -                    | \$ (18,643)             | \$ (3,879,066)            |
| Defined benefit obligation           | 873,484                 | (26,736)                        | (51,217)                                          | -                       | (15,291)                | 780,240                   |
| FVTPL financial instruments          | (21,363)                | (86,342)                        | -                                                 | -                       | 2,802                   | (104,903)                 |
| Others                               | 1,079,824               | (22,748)                        | -                                                 | 262                     | (28,929)                | 1,028,409                 |
|                                      | (1,826,902)             | (237,402)                       | (51,217)                                          | 262                     | (60,061)                | (2,175,320)               |
| Loss carry-forward                   | 1,124,541               | (456,246)                       | -                                                 | -                       | 13,146                  | 681,441                   |
| Investment credits                   | 382,736                 | 138,002                         | -                                                 | -                       | 13,475                  | 534,213                   |
|                                      | <u>\$ (319,625)</u>     | <u>\$ (555,646)</u>             | <u>\$ (51,217)</u>                                | <u>\$ 262</u>           | <u>\$ (33,440)</u>      | <u>\$ (959,666)</u>       |

- f. Items for which no deferred tax assets have been recognized for loss carry-forward, investment credits and deductible temporary differences

|                                  | December 31       |                     |
|----------------------------------|-------------------|---------------------|
|                                  | 2018              | 2017                |
|                                  | NT\$              | NT\$                |
| Loss carry-forward               | \$ 666,043        | \$ 542,054          |
| Deductible temporary differences | <u>332,255</u>    | <u>712,141</u>      |
|                                  | <u>\$ 998,298</u> | <u>\$ 1,254,195</u> |

The unrecognized loss carry-forward will expire through 2030.

- g. Information about unused loss carry-forward, unused investment credits, tax-exemption and other tax relief

As of December 31, 2018, the unused loss carry-forward comprised of:

| Expiry Year         | NT\$                |
|---------------------|---------------------|
| 2019                | \$ 163,916          |
| 2020                | 290,460             |
| 2021                | 159,641             |
| 2022                | 94,287              |
| 2023 and thereafter | <u>630,015</u>      |
|                     | <u>\$ 1,338,319</u> |

As of December 31, 2018, unused investment credits comprised of:

| Tax Credit Source                   | Remaining<br>Creditable Amount | Expiry Year         |
|-------------------------------------|--------------------------------|---------------------|
|                                     | NT\$                           |                     |
| Purchase of machinery and equipment | \$ 590,694                     | 2022                |
| Others                              | <u>40,472</u>                  | 2023 and thereafter |
|                                     | <u>\$ 631,166</u>              |                     |

As of December 31, 2018, profits attributable to the following expansion projects were exempted from income tax for a 5-year period:

| <b>Expansion of Construction Project</b>                   | <b>Tax-exemption Period</b> |
|------------------------------------------------------------|-----------------------------|
| Construction and expansion of 2007 by ASE                  | 2016.01-2020.12             |
| Construction and expansion of 2008 by ASE                  | 2014.01-2018.12             |
| Construction and expansion of 2008 by ASE Test Inc.        | 2014.01-2018.12             |
| Construction and expansion of 2009 by ASE Test Inc.        | 2018.01-2022.12             |
| Construction and expansion of 2008 by ASE Electronics Inc. | 2016.01-2020.12             |
| Construction and expansion of 2007 by SPIL                 | 2015.01-2019.12             |

Some China subsidiaries qualified as high technology enterprises were entitled to a reduced income tax rate of 15% and were eligible to deduct certain times of research and development expenses from their taxable income.

h. Unrecognized deferred tax liabilities associated with investments

As of December 31, 2018 and 2017, the taxable temporary differences associated with the investments in subsidiaries for which no deferred tax liabilities have been recognized were NT\$28,810,874 thousand and NT\$16,401,422 thousand, respectively.

i. Income tax assessments

The tax returns of the Company's R.O.C. subsidiaries through 2014 to 2016 have been examined by the tax authorities.

## 28. EARNINGS PER SHARE

The earnings and weighted average number of ordinary shares outstanding in the computation of earnings per share were as follows:

Net profit for the year

|                                                                | <b>For the Year Ended December 31</b> |                      |
|----------------------------------------------------------------|---------------------------------------|----------------------|
|                                                                | <b>2018</b>                           | <b>2017</b>          |
|                                                                | <b>NT\$</b>                           | <b>NT\$</b>          |
| Profit for the year attributable to owners of the Company      | \$ 25,262,356                         | \$ 22,987,819        |
| Effect of potentially dilutive ordinary shares:                |                                       |                      |
| From subsidiaries                                              | (418,295)                             | (813,627)            |
| From the investments in associates                             | -                                     | (367,687)            |
| From convertible bonds                                         | -                                     | 93,781               |
| Earnings used in the computation of diluted earnings per share | <u>\$ 24,844,061</u>                  | <u>\$ 21,900,286</u> |

Weighted average number of ordinary shares outstanding (in thousand shares):

|                                                                                           | <b>For the Year Ended December 31</b> |             |
|-------------------------------------------------------------------------------------------|---------------------------------------|-------------|
|                                                                                           | <b>2018</b>                           | <b>2017</b> |
| Weighted average number of ordinary shares in the computation of basic earnings per share | 4,245,247                             | 4,080,443   |

(Continued)

|                                                                                             | <b>For the Year Ended December 31</b> |                                 |
|---------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
|                                                                                             | <b>2018</b>                           | <b>2017</b>                     |
| Effect of potentially dilutive ordinary shares:                                             |                                       |                                 |
| From convertible bonds                                                                      | -                                     | 62,456                          |
| From employee share options                                                                 | 5,103                                 | 19,934                          |
| From employees' compensation                                                                | <u>779</u>                            | <u>21,787</u>                   |
| Weighted average number of ordinary shares in the computation of diluted earnings per share | <u>4,251,129</u>                      | <u>4,184,620</u><br>(Concluded) |

The share exchange between the Company and ASE was deemed as an organization restructure under common control, and the earnings per share of prior periods were calculated based on weighted average number of ordinary shares outstanding retrospectively adjusted in accordance with share exchange ratio stated in the joint share exchange agreement.

The Group is able to settle the employees' compensation by cash or shares. The Group assumed that the entire amount of the compensation would be settled in shares and the resulting potential shares were included in the weighted average number of ordinary shares outstanding used in the computation of diluted earnings per share if the effect is dilutive. Such dilutive effect of the potential shares was included in the computation of diluted earnings per share until shareholders approve the number of shares to be distributed to employees at their meeting in the following year.

The third unsecured convertible overseas bonds issued by ASE were anti-dilutive for the year ended December 31, 2017 and were excluded from the computation of diluted earnings per share for the respective year.

## 29. SHARE-BASED PAYMENT ARRANGEMENTS

### a. Employee share option plans of the Company

#### The Company's Option Plan

In order to attract, retain and reward employees, the Company has its employee share option plan for full-time employees of the Group and granted 150,000 thousand share options in 2018. Each share option represents the right to purchase one ordinary share of the Company when exercised. Under the terms of the plan, share options are granted at an exercise price equal to or not less than the closing price of the ordinary shares listed on the Taiwan Stock Exchange (TSE) at the issue date. The right of those share options granted under the plan is valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date. For any subsequent changes in the Company's capital structure or when cash dividend per ordinary share exceeds 1.5% of the market price per ordinary share, the exercise price is accordingly adjusted.

#### ASE's Option Plans

ASE had five employee share option plans for the Group's full-time employees. Each share option represents the right to purchase one ordinary share of ASE when exercised. Under the terms of the plans, share options are granted at an exercise price equal to or not less than the closing price of the ordinary shares listed on the TSE at the grant date. The option rights of these plans are valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date. For any subsequent changes in ASE's capital structure, the exercise price was accordingly adjusted. As disclosed in Note 1, the Company assumed ASE's obligations of outstanding employee share option plans starting from April 30, 2018, and each share option represents the right to purchase 0.5 ordinary share of the Company with all other terms and conditions held constant.

Information about share options for the period from January 1, 2018 to April 29, 2018 and for the year ended December 31, 2017 was as follows:

|                                                                                                | <b>For the Period from<br/>January 1, 2018 to<br/>April 29, 2018</b> |                                                                             | <b>For the Year Ended<br/>December 31, 2017</b>     |                                                                             |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------|
|                                                                                                | <b>Number of<br/>Options<br/>(In<br/>Thousands)</b>                  | <b>Weighted<br/>Average<br/>Exercise<br/>Price<br/>Per Share<br/>(NT\$)</b> | <b>Number of<br/>Options<br/>(In<br/>Thousands)</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price<br/>Per Share<br/>(NT\$)</b> |
| Balance, beginning of period                                                                   | 135,961                                                              | \$30.2                                                                      | 210,795                                             | \$27.3                                                                      |
| Options forfeited                                                                              | (1,692)                                                              | 36.3                                                                        | (5,407)                                             | 36.3                                                                        |
| Options expired                                                                                | -                                                                    | -                                                                           | (1,790)                                             | 21.1                                                                        |
| Options exercised                                                                              | (20,557)                                                             | 26.0                                                                        | (67,637)                                            | 21.0                                                                        |
| Options transferred to the Company in<br>accordance with the joint share<br>exchange agreement | <u>(113,712)</u>                                                     | 30.9                                                                        | <u>-</u>                                            | -                                                                           |
| Balance, end of period                                                                         | <u>-</u>                                                             | -                                                                           | <u>135,961</u>                                      | 30.2                                                                        |
| Options exercisable, end of period                                                             | <u>-</u>                                                             | -                                                                           | <u>85,642</u>                                       | 26.5                                                                        |

Starting from April 30, 2018, information about the share option plans that the Company granted and assumed was as follows:

|                                      | <b>For the Period from April 30, 2018<br/>to December 31, 2018</b> |                                                                     |
|--------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
|                                      | <b>Number of<br/>Options<br/>(In Thousands)</b>                    | <b>Weighted Average<br/>Exercise Price<br/>Per Share<br/>(NT\$)</b> |
| Balance, beginning of period         | -                                                                  | \$-                                                                 |
| Transferred from ASE                 | 56,856                                                             | 61.7                                                                |
| Options granted                      | 131,863                                                            | 56.4                                                                |
| Options forfeited                    | (1,582)                                                            | 71.5                                                                |
| Options exercised                    | <u>(3,323)</u>                                                     | 43.6                                                                |
| Balance, end of period               | <u>183,814</u>                                                     | 58.1                                                                |
| Options exercisable, end of period   | <u>36,354</u>                                                      | 58.1                                                                |
| Fair value of options granted (NT\$) | <u>\$16.28-19.12</u>                                               |                                                                     |

The weighted average share price at exercise dates of share options for the period from April 30, 2018 to December 31, 2018, the period from January 1, 2018 to April 29, 2018 and the year ended December 31, 2017 were NT\$68.5, NT\$41.0 and NT\$37.6, respectively. The options granted in 2007 were expired in December 2017 and, therefore, NT\$47,087 thousand was reclassified from capital surplus arising from employee share options to capital surplus arising from expired share options.

Information about outstanding share options that the Company granted and assumed at each balance sheet date was as follows:

|                                           | <b>Range of<br/>Exercise Price<br/>Per Share<br/>(NT\$)</b> | <b>Weighted<br/>Average<br/>Remaining<br/>Contractual<br/>Life (Years)</b> |
|-------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>December 31, 2018</b>                  |                                                             |                                                                            |
| ASE 4 <sup>th</sup> share options         | \$ 40.8-45.2                                                | 1.5                                                                        |
| ASE 5 <sup>th</sup> share options         | 73.0                                                        | 6.7                                                                        |
| The Company 1 <sup>st</sup> share options | 56.4                                                        | 9.9                                                                        |
| <b>December 31, 2017</b>                  |                                                             |                                                                            |
| ASE 4 <sup>th</sup> share options         | 20.4-22.6                                                   | 2.5                                                                        |
| ASE 5 <sup>th</sup> share options         | 36.5                                                        | 7.7                                                                        |

b. Employee share option plans of subsidiaries

ASE Mauritius Inc.'s Option Plan

ASE Mauritius Inc. has an employee share option plan for full-time employees of the Group which granted 30,000 thousand units in December 2007. Under the terms of the plan, each unit represents the right to purchase one ordinary share of ASE Mauritius Inc. when exercised. The option rights of the plan are valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date. The option rights of the plan was expired in December 2017, of which shares had not been exercised and, therefore, NT\$159,200 thousand was reclassified from non-controlling interest to capital surplus arising from expired employee share options.

USIE's Option Plans

The terms of the plans issued by USIE were the same with those option plans previously granted by ASE.

Information about share options was as follows:

|                                  | <b>For the Year Ended December 31</b>               |                                                                             |                                                     |                                                                             |
|----------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------|
|                                  | <b>2018</b>                                         |                                                                             | <b>2017</b>                                         |                                                                             |
|                                  | <b>Number of<br/>Options<br/>(In<br/>Thousands)</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price<br/>Per Share<br/>(US\$)</b> | <b>Number of<br/>Options<br/>(In<br/>Thousands)</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price<br/>Per Share<br/>(US\$)</b> |
| Balance at January 1             | 25,556                                              | \$2.2                                                                       | 25,933                                              | \$2.2                                                                       |
| Options exercised                | <u>(8,845)</u>                                      | 2.2                                                                         | <u>(377)</u>                                        | 1.9                                                                         |
| Balance at December 31           | <u>16,711</u>                                       | 2.1                                                                         | <u>25,556</u>                                       | 2.2                                                                         |
| Options exercisable, end of year | <u>16,711</u>                                       | 2.1                                                                         | <u>25,556</u>                                       | 2.2                                                                         |

Information about USIE's outstanding share options at each balance sheet date was as follows:

|                                                   | <b>Range of<br/>Exercise Price<br/>Per Share<br/>(US\$)</b> | <b>Weighted<br/>Average<br/>Remaining<br/>Contractual<br/>Life (Years)</b> |
|---------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>December 31, 2018</b>                          |                                                             |                                                                            |
| 1 <sup>st</sup> share options                     | \$ 1.5                                                      | 2.0                                                                        |
| 2 <sup>nd</sup> and 3 <sup>rd</sup> share options | 2.4-2.9                                                     | 2.1                                                                        |
| <b>December 31, 2017</b>                          |                                                             |                                                                            |
| 1 <sup>st</sup> share options                     | 1.5                                                         | 3.0                                                                        |
| 2 <sup>nd</sup> and 3 <sup>rd</sup> share options | 2.4-2.9                                                     | 2.9                                                                        |

In 2018 and 2017, the Group's shareholdings of USIE decreased because USIE's share options had been exercised. The transaction was accounted for as an equity transaction since the Group did not cease to have control over USIE and, as a result, capital surplus was decreased by NT\$1,239,456 thousand and NT\$52,388 thousand in 2018 and 2017, respectively.

#### USISH's Option Plan

Each unit represents the right to purchase one ordinary share of USISH when exercised. The options are valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date incorporated with certain performance conditions. For any subsequent changes in USISH's capital structure, the exercise price is accordingly adjusted.

Information about share options was as follows:

|                                  | <b>For the Year Ended December 31</b>               |                                                   |                                                     |                                                   |
|----------------------------------|-----------------------------------------------------|---------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                  | <b>2018</b>                                         |                                                   | <b>2017</b>                                         |                                                   |
|                                  | <b>Number of<br/>Options<br/>(In<br/>Thousands)</b> | <b>Exercise<br/>Price<br/>Per Share<br/>(CNY)</b> | <b>Number of<br/>Options<br/>(In<br/>Thousands)</b> | <b>Exercise<br/>Price<br/>Per Share<br/>(CNY)</b> |
| Balance at January 1             | 22,341                                              | \$ 15.5                                           | 24,997                                              | \$ 15.5                                           |
| Options forfeited                | <u>(804)</u>                                        | 15.5                                              | <u>(2,656)</u>                                      | 15.5                                              |
| Balance at December 31           | <u>21,537</u>                                       | 15.5                                              | <u>22,341</u>                                       | 15.5                                              |
| Options exercisable, end of year | <u>12,884</u>                                       | 15.5                                              | <u>8,896</u>                                        | 15.5                                              |

As of December 31, 2018 and 2017, the remaining contractual life of the share options were 6.9 years and 7.9 years, respectively.

For the years ended December 31, 2018 and 2017, employee benefit expense recognized on the aforementioned employee share option plans were NT\$215,648 thousand and NT\$354,765 thousand, respectively.

#### c. New shares reserved for subscription by employees under cash capital increase

As disclosed in Note 25, the board of directors of ASE approved the cash capital increase in December 2016 and, as required under the Company Act in the R.O.C., simultaneously granted options to employees to purchase 10% of such newly issued shares. The grant of the options was accounted for as

employee options, accordingly a share-based compensation, and was measured at fair value in accordance with IFRS 2. ASE recognized employee benefits expense and capital surplus arising from exercised employee share options of NT\$84,000 thousand in full at the grant date (also the vested date), of which 4,836 thousand shares has not been exercised and, therefore, NT\$13,541 thousand was reclassified from capital surplus arising from exercised employee share options to capital surplus arising from expired share options.

Information about ASE's employee share options related to the aforementioned newly issued shares was as follows:

|                                                | <b>Number of<br/>Options<br/>(In Thousand)</b> |
|------------------------------------------------|------------------------------------------------|
| Options granted for the year ended 2017        | 30,000                                         |
| Options exercised for the year ended 2017      | 25,164                                         |
| Fair value of options granted (NT\$ per share) | \$ 2.80                                        |

Fair value was measured using the Black-Scholes Option Pricing Model and the inputs to the model were as follows:

|                               |                     |
|-------------------------------|---------------------|
| Share price at the grant date | NT\$36.55 per share |
| Exercise price                | NT\$34.30 per share |
| Expected volatility           | 27.15%              |
| Expected lives                | 47 days             |
| Expected dividend yield       | -                   |
| Risk free interest rate       | 0.37%               |

Expected volatility was based on ASE's historical share prices volatility.

- d. Fair value of share options granted by the Company in 2018 were measured at the grant date by using the trinomial tree model, and the inputs to the model were as follows:

|                               |                     |
|-------------------------------|---------------------|
| Share price at the grant date | NT\$58.80 per share |
| Exercise price                | NT\$56.40 per share |
| Expected volatility           | 27.77%-28.86%       |
| Expected lives                | 4.8 years-7.0 years |
| Expected dividend yield       | -                   |
| Risk free interest rate       | 0.73%-0.80%         |

Expected volatility was based on the Company's and ASE's historical share prices volatility.

### 30. BUSINESS COMBINATIONS

- a. Subsidiaries acquired

| <b>Subsidiary</b> | <b>Principal Activity</b>                                                     | <b>Date of Acquisition</b> | <b>Proportion of<br/>Voting Equity<br/>Interests<br/>Acquired (%)</b> | <b>Consideration<br/>Transferred</b> |
|-------------------|-------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------|--------------------------------------|
| SPII              | Engaged in the assembly, testing and turnkey services of integrated circuits. | April 30, 2018             | 100                                                                   | <u>\$ 168,440,585</u>                |

As disclosed in Note 1, the Company acquired 100% shareholdings of SPIL at NT\$51.2 in cash per SPIL's ordinary share in accordance with the joint share exchange agreements between ASE and SPIL.

b. Assets acquired and liabilities assumed at the date of acquisition

|                                                | NT\$                  |
|------------------------------------------------|-----------------------|
| Assets                                         |                       |
| Cash and cash equivalents                      | \$ 20,088,970         |
| Trade and other receivables                    | 15,840,649            |
| Inventories                                    | 5,693,644             |
| Property, plant and equipment                  | 81,985,622            |
| Intangible assets                              | 31,354,386            |
| Others                                         | 24,953,930            |
| Liabilities                                    |                       |
| Trade and other payables                       | (19,755,598)          |
| Borrowings and bonds payables                  | (24,157,174)          |
| Others                                         | <u>(3,315,404)</u>    |
| Fair value of identifiable net assets acquired | <u>\$ 132,689,025</u> |

c. Goodwill recognized on acquisitions

|                                                      | NT\$                 |
|------------------------------------------------------|----------------------|
| Total consideration                                  | \$ 168,440,585       |
| Add: Non-controlling interests                       | 3,582,866            |
| Less: Fair value of identifiable net assets acquired | <u>(132,689,025)</u> |
| Goodwill recognized on acquisition                   | <u>\$ 39,334,426</u> |

The fair value of non-controlling interests were determined using market approach based on the valuation multiples of comparable companies and the discount rate for lack of marketability. The significant unobservable inputs is the discount rate for lack of marketability of 25%.

The goodwill recognized in the acquisition of SPIL mainly represents the control premium included in the cost of the combination. In addition, the consideration paid for the combination effectively included amounts attributed to the benefits of expected synergies, revenue growth and future market development of SPIL. These benefits are not recognized separately from goodwill because they do not meet the recognition criteria for identifiable intangible assets.

The goodwill recognized on acquisition is not expected to be deductible for tax purpose.

d. Net cash outflow on acquisition of subsidiaries

|                                                                                            | NT\$                 |
|--------------------------------------------------------------------------------------------|----------------------|
| Total consideration                                                                        | \$ 168,440,585       |
| Less: Payable for consideration representing the ordinary shares<br>originally held by ASE | (53,109,760)         |
| Less: Cash and cash equivalent acquired                                                    | <u>(20,088,970)</u>  |
|                                                                                            | <u>\$ 95,241,855</u> |



e. Impact of acquisitions on the results of the Group

As of December 31, 2018, the results of operations from SPIL since the acquisition date were included in the consolidated statements of comprehensive income and were as follows:

|                   | NT\$                |
|-------------------|---------------------|
| Operating revenue | \$ 61,247,727       |
| Profit            | <u>\$ 7,257,564</u> |

Had these business combinations been in effect at the beginning of the annual reporting period and the investments in SPIL originally accounted for using the equity method, as disclosed in Note 15, been remeasured to their fair value on January 1, 2018, the Group's operating revenue for the year ended December 31, 2018 would have been NT\$397,261,461 thousand, and profit for the year ended December 31, 2018 would have been NT\$24,726,977 thousand. This pro-forma information is for illustrative purposes only and is not necessarily an indication of the operating revenue and results of operations of the Group that actually would have been achieved had the acquisition been completed on January 1, 2018, nor is it intended to be a projection of future results.

In determining the pro-forma operating revenue and profit of the Company had SPIL been acquired at the beginning of the current reporting period, the management:

- 1) Calculated the depreciation of property, plant and equipment and the amortization of intangible assets acquired on the basis of the fair values at the initial accounting for the business combination rather than the carrying amounts recognized in the respective pre-acquisition financial statements; and
- 2) Calculated borrowing costs based on the funding status, credit ratings and debt/equity ratios of the Group after the business combination.

### 31. DISPOSAL OF SUBSIDIARIES

The Group disposed of its subsidiaries Kun Shan Ding Yue Real Estate Development Co., Ltd. ("KSDY"), in June 2017 and, as a result, the Group lost its control over KSDY.

a. Gain on disposal of subsidiaries

|                          | NT\$                |
|--------------------------|---------------------|
| Total consideration      | \$ 7,046,464        |
| Net assets disposed of   | <u>(1,457,007)</u>  |
| Gain on disposal of KSDY | <u>\$ 5,589,457</u> |

b. Analysis of assets and liabilities on the date control was lost

|                                             | NT\$                |
|---------------------------------------------|---------------------|
| Current assets                              |                     |
| Cash and cash equivalents                   | \$ 29,133           |
| Inventories related to real estate business | <u>1,427,874</u>    |
| Net assets disposed of                      | <u>\$ 1,457,007</u> |

### 32. EQUITY TRANSACTION WITH NON-CONTROLLING INTERESTS

In January 2017, USI completed its cash capital increase of NT\$1,000,000 thousand and the Group's shareholdings of USI increased from 75.2% to 75.7% since the Group did not proportionally subscribe for additional new shares. The transaction was accounted for as an equity transaction since the transaction did not change the Company's control over USI and capital surplus was increased by NT\$3,055 thousand in the first quarter of 2017.

In January 2018, the shareholders' meeting of the USIE resolved to repurchase its own outstanding 3,738 thousand ordinary shares at US\$17.49 per share and, as a result, the Group's shareholdings of USIE increased from 96.9% to 98.6%. The transaction was accounted for as an equity transaction since the transaction did not change the Company's control over USIE and capital surplus was decreased by NT\$1,127,632 thousand in the first quarter of 2018. In February 2018, the board of directors of USIE resolved February 26, 2018 was the record date for capital reduction and then the repurchased ordinary shares were subsequently cancelled.

In March 2018, ASE's board of directors resolved to sign the shares transfer agreement by its subsidiary, J&R Holding, for acquiring shares of ASEN from NXP B.V. at US\$127,113 thousand (NT\$3,871,862 thousand). As a result, the percentage of ownership in ASEN was increased from 60% to 100%. The transaction was accounted for as an equity transaction since the transaction did not change the Company's control over ASEN and capital surplus was decreased by NT\$1,737,315 thousand in the third quarter of 2018.

In August 2018, J&R Holding's board of directors further resolved to sell 30% shareholdings of ASEN to Tsinghua Unigroup Ltd. at US\$95,335 thousand. As a result, the Group's shareholdings of ASEN was decreased from 100% to 70%. The transaction was accounted for as an equity transaction since the Group also did not cease to have control over ASEN and capital surplus was increased by NT\$1,114,504 thousand in the fourth quarter of 2018.

In July 2018, ASE and UGTW's board of directors have approved to acquire the outstanding ordinary shares of USIINC and USI at NT\$35 and NT\$18 per ordinary shares, respectively. ASE and UGTW also purchased the ordinary shares from dissenting shareholders in August 2018 and recognized an increase in capital surplus by NT\$9,530 thousand. ASE has completed the acquisition of USIINC's remaining outstanding ordinary shares and recognized a decrease in capital surplus by NT\$28,152 thousand.

### 33. CASH FLOWS INFORMATION

#### a. Non-cash investing activities

In addition to Notes 22, 25 and 30, the Group entered into the following non-cash investing activities which were not reflected in the consolidated statements of cash flows for the years ended December 31, 2018 and 2017 were as follows:

|                                            | <b>For the Year Ended December 31</b> |                      |
|--------------------------------------------|---------------------------------------|----------------------|
|                                            | <b>2018</b>                           | <b>2017</b>          |
|                                            | <b>NT\$</b>                           | <b>NT\$</b>          |
| Payments for property, plant and equipment |                                       |                      |
| Purchase of property, plant and equipment  | \$ 39,092,238                         | \$ 23,677,682        |
| Increase in other non-current assets       | 402,255                               | 90,560               |
| Decrease in other payables                 | 1,942,259                             | 982,260              |
| Capitalized borrowing costs                | <u>(50,309)</u>                       | <u>(51,262)</u>      |
|                                            | <u>\$ 41,386,443</u>                  | <u>\$ 24,699,240</u> |

(Continued)

|                                                              | <b>For the Year Ended December 31</b> |                     |
|--------------------------------------------------------------|---------------------------------------|---------------------|
|                                                              | <b>2018</b>                           | <b>2017</b>         |
|                                                              | <b>NT\$</b>                           | <b>NT\$</b>         |
| Proceeds from disposal of property, plant and equipment      |                                       |                     |
| Consideration from disposal of property, plant and equipment | \$ 1,133,435                          | \$ 1,487,334        |
| Decrease (increase) in other receivables                     | <u>(5,791)</u>                        | <u>876</u>          |
|                                                              | <u>\$ 1,127,644</u>                   | <u>\$ 1,488,210</u> |
| Payments for investment properties                           |                                       |                     |
| Purchase of investment properties                            | \$ 125,853                            | \$ 186,535          |
| Capitalized borrowing costs                                  | <u>(89)</u>                           | <u>(13)</u>         |
|                                                              | <u>\$ 125,764</u>                     | <u>\$ 186,522</u>   |
| Payments for other intangible assets                         |                                       |                     |
| Purchase of other intangible assets                          | \$ 537,659                            | \$ 277,825          |
| Decrease in other payables                                   | <u>40,106</u>                         | <u>60,159</u>       |
|                                                              | <u>\$ 577,765</u>                     | <u>\$ 337,984</u>   |
| Net cash inflow from disposal of subsidiaries                |                                       |                     |
| Consideration from disposal of subsidiaries                  | \$ -                                  | \$ 7,046,464        |
| Increase in other payables                                   | -                                     | 3,552               |
| Cash and cash equivalent disposed of                         | <u>-</u>                              | <u>(29,133)</u>     |
|                                                              | <u>\$ -</u>                           | <u>\$ 7,020,883</u> |
|                                                              |                                       | (Concluded)         |

b. Changes in liabilities arising from financing activities

|                                                     | <b>Short-term Borrowings</b> | <b>Bonds Payable</b> | <b>Long-term Borrowings</b> | <b>Total</b>         |
|-----------------------------------------------------|------------------------------|----------------------|-----------------------------|----------------------|
|                                                     | <b>NT\$</b>                  | <b>NT\$</b>          | <b>NT\$</b>                 | <b>NT\$</b>          |
| Balance at January 1, 2018                          | \$ 17,962,471                | \$ 23,142,780        | \$ 35,406,628               | \$ 76,511,879        |
| Financing cash flows                                | 22,327,813                   | (6,185,600)          | 85,510,959                  | 101,653,172          |
| Non-cash changes                                    |                              |                      |                             |                      |
| Acquisition through business combinations (Note 30) | 3,619,858                    | 4,457,191            | 16,080,125                  | 24,157,174           |
| Bonds conversion                                    | -                            | (4,457,191)          | -                           | (4,457,191)          |
| Reclassification for applying IFRS 9                | (1,301,994)                  | -                    | -                           | (1,301,994)          |
| Amortization of issuance cost                       | -                            | 28,756               | 188,217                     | 216,973              |
| Effects of foreign currency exchange                | <u>655,321</u>               | <u>-</u>             | <u>712,400</u>              | <u>1,367,721</u>     |
| Balance at December 31, 2018                        | <u>\$ 43,263,469</u>         | <u>\$ 16,985,936</u> | <u>\$137,898,329</u>        | <u>\$198,147,734</u> |
| Balance at January 1, 2017                          | \$ 20,955,522                | \$ 36,999,903        | \$ 53,115,563               | \$ 111,070,988       |
| Financing cash flows                                | (2,038,993)                  | (1,123,972)          | (16,473,381)                | (19,636,346)         |
| Non-cash changes                                    |                              |                      |                             |                      |
| Bonds conversion                                    | -                            | (11,650,369)         | -                           | (11,650,369)         |
| Amortization of issuance cost                       | -                            | 319,463              | 5,790                       | 325,253              |
| Effects of foreign currency exchange                | <u>(954,058)</u>             | <u>(1,402,245)</u>   | <u>(1,241,344)</u>          | <u>(3,597,647)</u>   |
| Balance at December 31, 2017                        | <u>\$ 17,962,471</u>         | <u>\$ 23,142,780</u> | <u>\$ 35,406,628</u>        | <u>\$ 76,511,879</u> |

### 34. OPERATING LEASE ARRANGEMENTS

#### a. The Group as lessee

In addition to those disclosed in Note 20, the Company and some of its subsidiary located in R.O.C. lease the land on which their buildings are located under various operating lease agreements with the R.O.C. government expiring through January 2037. The agreements grant these entities the option to renew the leases and reserve the right for the lessor to adjust the lease payments upon an increase in the assessed value of the land and to terminate the leases under certain conditions. In addition, the Group leases buildings, machinery and equipment under operating leases.

The subsidiaries' offices located in U.S.A. and Japan, etc. are leased from third parties and the lease terms will expire through 2019 to 2028 with the option to renew the leases upon expiration.

The Group recognized rental expense of NT\$1,593,315 thousand and NT\$1,193,477 thousand for the years ended December 31, 2018 and 2017, respectively, from the aforementioned operating lease arrangements and the land use rights disclosed in Note 20.

The future minimum lease payments of non-cancellable operating lease commitments were as follows:

|                   | <b>December 31</b>  |                     |
|-------------------|---------------------|---------------------|
|                   | <b>2018</b>         | <b>2017</b>         |
|                   | <b>NT\$</b>         | <b>NT\$</b>         |
| Less than 1 year  | \$ 509,994          | \$ 246,026          |
| 1 to 5 years      | 828,482             | 439,408             |
| More than 5 years | <u>1,047,626</u>    | <u>419,232</u>      |
|                   | <u>\$ 2,386,102</u> | <u>\$ 1,104,666</u> |

#### b. The Group as lessor

The Group leased out the investment properties under operating lease with leasing periods from 1 to 15 years. The Group granted lessees the option to renew the lease upon expiration and without bargain purchase.

The future minimum lease payments of non-cancellable operating lease agreements were as follows:

|                   | <b>December 31,<br/>2018</b> |
|-------------------|------------------------------|
|                   | <b>NT\$</b>                  |
| Less than 1 year  | \$ 916,891                   |
| 1 to 5 years      | 2,391,843                    |
| More than 5 years | <u>1,157,093</u>             |
|                   | <u>\$ 4,465,827</u>          |

### 35. CAPITAL MANAGEMENT

The capital structure of the Group consists of debt and equity. The Group manages its capital to ensure that entities in the Group will be able to continue as going concerns while maximizing the return to shareholders through the optimization of the debt and equity balance. Key management personnel of the Group periodically reviews the cost of capital and the risks associated with each class of capital. In order to balance the overall capital structure, the Group may adjust the amount of dividends paid to shareholders,

the number of new shares issued or repurchased, and the amount of new debt issued or existing debt redeemed.

The Group is not subject to any externally imposed capital requirements except those discussed in Note 21.

### 36. FINANCIAL INSTRUMENTS

#### a. Fair value of financial instruments that are not measured at fair value

##### 1) Fair value of financial instruments not measured at fair value but for which fair value is disclosed

Except bonds payable measured at amortized cost, the management considered that the carrying amounts of financial assets and financial liabilities not measured at fair value approximate their fair values. The carrying amounts and fair value of bonds payable as of December 31, 2018 and 2017, respectively, were as follows:

|                   | <b>Carrying<br/>Amount</b> | <b>Fair Value</b> |
|-------------------|----------------------------|-------------------|
|                   | <b>NT\$</b>                | <b>NT\$</b>       |
| December 31, 2018 | \$ 16,985,936              | \$ 17,126,752     |
| December 31, 2017 | 23,142,780                 | 23,247,085        |

##### 2) Fair value hierarchy

The aforementioned fair value hierarchy of bonds payable was Level 3 which was determined based on discounted cash flow analysis with the applicable yield curve for the duration or the latest trading prices. The significant unobservable inputs is discount rates that reflected the credit risk of various counterparties and the latest trading prices.

#### b. Fair value of financial instruments that are measured at fair value on a recurring basis

##### 1) Fair value hierarchy

|                                     | <b>Level 1</b>      | <b>Level 2</b>      | <b>Level 3</b>    | <b>Total</b>        |
|-------------------------------------|---------------------|---------------------|-------------------|---------------------|
|                                     | <b>NT\$</b>         | <b>NT\$</b>         | <b>NT\$</b>       | <b>NT\$</b>         |
| <u>December 31, 2018</u>            |                     |                     |                   |                     |
| Financial assets at FVTPL           |                     |                     |                   |                     |
| Derivative financial assets         |                     |                     |                   |                     |
| Swap contracts                      | \$ -                | \$ 1,557,714        | \$ -              | \$ 1,557,714        |
| Forward exchange contracts          | -                   | 32,070              | -                 | 32,070              |
| Non-derivative financial assets     |                     |                     |                   |                     |
| Quoted ordinary shares              | 5,151,255           | -                   | -                 | 5,151,255           |
| Open-end mutual funds               | 581,800             | -                   | -                 | 581,800             |
| Unquoted preferred shares           | -                   | -                   | 275,000           | 275,000             |
| Private-placement funds             | -                   | -                   | 200,123           | 200,123             |
| Hybrid financial assets             |                     |                     |                   |                     |
| Private-placement convertible bonds | -                   | 100,496             | -                 | 100,496             |
|                                     | <u>\$ 5,733,055</u> | <u>\$ 1,690,280</u> | <u>\$ 475,123</u> | <u>\$ 7,898,458</u> |

(Continued)

|                                                  | <b>Level 1</b>      | <b>Level 2</b>    | <b>Level 3</b>      | <b>Total</b>        |
|--------------------------------------------------|---------------------|-------------------|---------------------|---------------------|
|                                                  | <b>NT\$</b>         | <b>NT\$</b>       | <b>NT\$</b>         | <b>NT\$</b>         |
| Financial assets at FVTOCI                       |                     |                   |                     |                     |
| Investments in equity instruments                |                     |                   |                     |                     |
| Unquoted ordinary shares                         | \$ -                | \$ -              | \$ 540,730          | \$ 540,730          |
| Limited partnership                              | -                   | -                 | 39,669              | 39,669              |
| Investments in debt instruments                  |                     |                   |                     |                     |
| Unsecured subordinate corporate bonds            | -                   | -                 | 1,016,924           | 1,016,924           |
|                                                  | <u>\$ -</u>         | <u>\$ -</u>       | <u>\$ 1,597,323</u> | <u>\$ 1,597,323</u> |
| Financial liabilities at FVTPL                   |                     |                   |                     |                     |
| Derivative financial liabilities                 |                     |                   |                     |                     |
| Swap contracts                                   | \$ -                | \$ 29,058         | \$ -                | \$ 29,058           |
| Forward exchange contracts                       | -                   | 7,597             | -                   | 7,597               |
|                                                  | <u>\$ -</u>         | <u>\$ 36,655</u>  | <u>\$ -</u>         | <u>\$ 36,655</u>    |
| December 31, 2017                                |                     |                   |                     |                     |
| Financial assets at FVTPL                        |                     |                   |                     |                     |
| Financial assets designated as at FVTPL          |                     |                   |                     |                     |
| Private-placement convertible bonds              | \$ -                | \$ 100,496        | \$ -                | \$ 100,496          |
| Derivative financial assets                      |                     |                   |                     |                     |
| Forward exchange contracts                       | -                   | 61,325            | -                   | 61,325              |
| Swap contracts                                   | -                   | 60,538            | -                   | 60,538              |
| Non-derivative financial assets held for trading |                     |                   |                     |                     |
| Quoted ordinary shares                           | 4,410,732           | -                 | -                   | 4,410,732           |
| Open-end mutual funds                            | <u>589,976</u>      | <u>-</u>          | <u>-</u>            | <u>589,976</u>      |
|                                                  | <u>\$ 5,000,708</u> | <u>\$ 222,359</u> | <u>\$ -</u>         | <u>\$ 5,223,067</u> |
| Available-for-sale financial assets              |                     |                   |                     |                     |
| Unquoted ordinary shares                         | \$ -                | \$ -              | \$ 662,477          | \$ 662,477          |
| Limited Partnership                              | -                   | -                 | 246,072             | 246,072             |
| Quoted ordinary shares                           | 279,791             | -                 | -                   | 279,791             |
| Open-end mutual funds                            | <u>23,825</u>       | <u>-</u>          | <u>-</u>            | <u>23,825</u>       |
|                                                  | <u>\$ 303,616</u>   | <u>\$ -</u>       | <u>\$ 908,549</u>   | <u>\$ 1,212,165</u> |
| Financial liabilities at FVTPL                   |                     |                   |                     |                     |
| Derivative financial liabilities                 |                     |                   |                     |                     |
| Swap contracts                                   | \$ -                | \$ 652,107        | \$ -                | \$ 652,107          |
| Forward exchange contracts                       | -                   | 25,323            | -                   | 25,323              |
|                                                  | <u>\$ -</u>         | <u>\$ 677,430</u> | <u>\$ -</u>         | <u>\$ 677,430</u>   |
|                                                  |                     |                   |                     | (Concluded)         |

For the financial assets and liabilities that were measured at fair value on a recurring basis held for the years ended December 31, 2018 and 2017, there were no transfers between Level 1 and Level 2 of the fair value hierarchy.

2) Reconciliation of Level 3 fair value measurements of financial assets

For the year ended December 31, 2018

| Financial Assets                                                                                       | Financial Assets at FVTPL | Financial Assets at FVTOCI |                     | Total               |
|--------------------------------------------------------------------------------------------------------|---------------------------|----------------------------|---------------------|---------------------|
|                                                                                                        | Equity Instruments        | Equity Instruments         | Debt Instruments    |                     |
|                                                                                                        | NT\$                      | NT\$                       | NT\$                | NT\$                |
| Balance at January 1 (Note 3)                                                                          | \$ -                      | \$ 908,549                 | \$ 1,080,000        | \$ 1,988,549        |
| Recognized in profit or loss                                                                           | (2,313)                   | -                          | -                   | (2,313)             |
| Recognized in other comprehensive income (included in unrealized losses on financial assets at FVTOCI) | -                         | (224,172)                  | (63,076)            | (287,248)           |
| Purchases                                                                                              | 477,436                   | 105,000                    | -                   | 582,436             |
| Disposals                                                                                              | -                         | (208,978)                  | -                   | (208,978)           |
| Balance at December 31                                                                                 | <u>\$ 475,123</u>         | <u>\$ 580,399</u>          | <u>\$ 1,016,924</u> | <u>\$ 2,072,446</u> |

For the year ended December 31, 2017

|                                          | NT\$              |
|------------------------------------------|-------------------|
| Balance at January 1                     | \$ 904,790        |
| Purchases                                | 2,649             |
| Recognized in profit or loss             | 28                |
| Recognized in other comprehensive income | 17,284            |
| Disposals                                | <u>(16,202)</u>   |
| Balance at December 31                   | <u>\$ 908,549</u> |

3) Valuation techniques and assumptions applied for the purpose of measuring fair value

- a) Valuation techniques and inputs applied for the purpose of measuring Level 2 fair value measurement

| Financial Instruments                                       | Valuation Techniques and Inputs                                                                                                                                                                                                              |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Derivatives - swap contracts and forward exchange contracts | Discounted cash flows - Future cash flows are estimated based on observable forward exchange rates at balance sheet dates and contract forward exchange rates, discounted at rates that reflected the credit risk of various counterparties. |
| Private-placement convertible bonds                         | Discounted cash flows - Future cash flows are estimated based on observable stock prices at balance sheet dates and contract conversion prices, discounted at rates that reflected the credit risk of various counterparties.                |

- b) Valuation techniques and inputs applied for the purpose of measuring Level 3 fair value measurement

The fair value of unquoted ordinary shares and private-placement funds were determined using market approach and asset-based approach. The significant unobservable inputs is the discount

for lack of marketability of 20% to 30%. If the discount for lack of marketability to the valuation model were increased by 1% to reflect reasonably possible alternative assumptions while all the other variables were held constant, the fair value of unquoted shares would have decreased approximately by NT\$7,700 thousand.

The fair values of investments in limited partnership are measured by estimating future cash inflows from disposal (net of transaction cost).

The fair values of the unsecured subordinate corporate bonds were determined using income approach based on a discounted cash flow analysis. The significant unobservable input is the discount rate that reflects the credit risk of the counterparty. If the discount rate was increased by 0.1% while all the other variables were held constant, the fair value of the bonds would have decreased approximately by NT\$7,000 thousand.

c. Categories of financial instruments

|                                          | <b>December 31</b> |             |
|------------------------------------------|--------------------|-------------|
|                                          | <b>2018</b>        | <b>2017</b> |
|                                          | <b>NT\$</b>        | <b>NT\$</b> |
| <hr/> <b>Financial assets</b> <hr/>      |                    |             |
| FVTPL                                    |                    |             |
| Designated as at FVTPL                   | \$ -               | \$ 100,496  |
| Held for trading                         | -                  | 5,122,571   |
| Mandatorily at FVTPL                     | 7,898,458          | -           |
| Available-for-sale financial assets      | -                  | 1,212,165   |
| Loans and receivables (Note 1)           | -                  | 103,973,567 |
| Measured at amortized cost (Note 1)      | 139,866,736        | -           |
| FVTOCI                                   |                    |             |
| Equity instruments                       | 580,399            | -           |
| Debt instruments                         | 1,016,924          | -           |
| <hr/> <b>Financial liabilities</b> <hr/> |                    |             |
| FVTPL                                    |                    |             |
| Held for trading                         | 36,655             | 677,430     |
| Financial liabilities for hedging        | 3,899,634          | -           |
| Measured at amortized cost (Note 2)      | 286,035,732        | 139,561,999 |

Note 1: The balances included financial assets measured at amortized cost, which comprise cash and cash equivalents, trade and other receivables and other financial assets.

Note 2: The balances included financial liabilities measured at amortized cost, which comprise short-term borrowings, trade and other payables, bonds payable and long-term borrowings.

d. Financial risk management objectives and policies

The derivative instruments used by the Group are to mitigate risks arising from ordinary business operations. All derivative transactions entered into by the Group are designated as either hedging or trading. Derivative transactions entered into for hedging purposes must hedge risk against fluctuations in foreign exchange rates and interest rates arising from operating activities. The currencies and the amount of derivative instruments held by the Group must match its hedged assets and liabilities denominated in foreign currencies.



The Group's risk management department monitors risks to mitigate risk exposures, reports unsettled position, transaction balances and related gains or losses to the Group's chief financial officer on monthly basis.

#### 1) Market risk

The Group's activities exposed it primarily to the financial risks of changes in foreign currency exchange rates and interest rates. Gains or losses arising from fluctuations in foreign currency exchange rates of a variety of derivative financial instruments were approximately offset by those of hedged items. Interest rate risk was not significant due to the cost of capital was expected to be fixed.

There had been no change to the Group's exposure to market risks or the manner in which these risks were managed and measured.

##### a) Foreign currency exchange rate risk

The Group had sales and purchases as well as financing activities denominated in foreign currency which exposed the Group to foreign currency exchange rate risk. The Group entered into a variety of derivative financial instruments to hedge foreign currency exchange rate risk to minimize the fluctuations of assets and liabilities denominated in foreign currencies.

The carrying amounts of the Group's foreign currency denominated monetary assets and liabilities (including those eliminated upon consolidation) as well as derivative instruments which exposed the Group to foreign currency exchange rate risk at each balance sheet date are presented in Note 40.

The Group was principally subject to the impact to exchange rate fluctuation in US\$ and JPY against NT\$ or CNY. 1% is the sensitivity rate used when reporting foreign currency exchange rate risk internally to key management personnel and represents management's assessment of the reasonably possible change in foreign currency exchange rates. The sensitivity analysis included financial assets and liabilities and inter-company receivables and payables within the Group. The changes in profit before income tax due to a 1% change in U.S. dollars and Japanese yen both against NT\$ and CNY would be NT\$129,000 thousand and NT\$101,000 thousand for the years ended December 31, 2018 and 2017, respectively. Hedging contracts and hedged items have been taken into account while measuring the changes in profit before income tax. The abovementioned sensitivity analysis mainly focused on the foreign currency monetary items at the end of the year. As the year-end exposure did not reflect the exposure for the years ended December 31, 2018 and 2017, the abovementioned sensitivity analysis was unrepresentative of those years.

#### Hedge accounting-2018

The Group's hedging strategy is to lift foreign currency borrowings to avoid 100% exchange rate exposure of its foreign currency equity instruments which is designated as fair value hedges. Hedge adjustments are made when the foreign currency equity instruments were evaluated based on the exchange rates on each balance sheet date, the foreign exchange gains (losses) will be totally offset.

The source of hedge ineffectiveness in these hedging relationships is the material difference between the notional amounts of foreign currency borrowings and foreign currency equity instruments. No other sources of ineffectiveness is expected to emerge from these hedging relationships.

b) Interest rate risk

Except a portion of long-term borrowings and bonds payable at fixed interest rates, the Group was exposed to interest rate risk because group entities borrowed funds at floating interest rates. Changes in market interest rates will lead to variances in effective interest rates of borrowings from which the future cash flow fluctuations arise. The Group uses financing tool with low interest rate and favorable term so as to maintain low financing cost, adequate banking facilities, as well as to hedge interest rate risk.

The carrying amounts of the Group's financial assets and financial liabilities with exposure to interest rates at each balance sheet date were as follows:

|                               | <b>December 31</b> |               |
|-------------------------------|--------------------|---------------|
|                               | <b>2018</b>        | <b>2017</b>   |
|                               | <b>NT\$</b>        | <b>NT\$</b>   |
| Fair value interest rate risk |                    |               |
| Financial liabilities         | \$ 17,485,561      | \$ 17,552,955 |
| Cash flow interest rate risk  |                    |               |
| Financial assets              | 32,942,747         | 39,880,736    |
| Financial liabilities         | 172,737,393        | 42,270,321    |

For assets and liabilities with floating interest rates, a 100 basis point increase or decrease was used when reporting interest rate risk internally to key management personnel. If interest rates had been 100 basis points (1%) higher or lower and all other variables held constant, the Group's profit before income tax for the years ended December 31, 2018 and 2017 would have decreased or increased approximately by NT\$1,398,000 thousand and NT\$24,000 thousand, respectively. Hedging contracts and hedged items have been taken into account while measuring the changes in profit before income tax. The abovementioned sensitivity analysis mainly focused on the interest rate items at the end of the reporting period. As the year-end exposure did not reflect the exposure for the years ended December 31, 2018 and 2017, the abovementioned sensitivity analysis was unrepresentative of those periods.

c) Other price risk

The Group was exposed to equity or bond price risk through its investments in financial assets at FVTPL (included quoted ordinary shares, open-end mutual funds, unquoted preferred shares, private-placement funds, and private-placement convertible bonds) and financial assets at FVTOCI for the year ended December 31, 2018. If equity and bond prices were 1% higher or lower, profit before income tax for the year ended December 31, 2018 would have increased or decreased approximately by NT\$64,000 thousand and other comprehensive income before income tax for the year ended December 31, 2018 would have increased or decreased approximately by NT\$16,000 thousand.

ASE and its subsidiaries were exposed to equity or debt price risk through its investments in financial assets at FVTPL (including private-placement convertible bonds, quoted shares and open-end mutual funds) and available-for-sale financial assets for the year ended December 31, 2017. If equity and debt prices were 1% higher or lower, profit before income tax for the year ended December 31, 2017 would have increased or decreased approximately by NT\$52,000 thousand and other comprehensive income before income tax for the year ended December 31, 2017 would have increased or decreased approximately by NT\$13,000 thousand.

2) Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group's credit risk arises from cash and cash equivalents, trade and

other receivables and other financial assets. The Group's maximum exposure to credit risk was the carrying amounts of financial assets in the consolidated balance sheets.

As of December 31, 2018 and 2017, the Group's five largest customers accounted for 36% and 33% of trade receivables, respectively. The Group transacts with a large number of unrelated customers and, thus, no concentration of credit risk was observed.

### 3) Liquidity risk

The Group manages liquidity risk by maintaining adequate working capital and banking facilities to fulfill the demand for cash flow used in the Group's operation and capital expenditure. The Group also monitors its compliance with all the loan covenants. Liquidity risk is not considered to be significant.

In the table below, financial liabilities with a repayment on demand clause were included in the earliest time band regardless of the probability of counter-parties choosing to exercise their rights. The maturity dates for other non-derivative financial liabilities were based on the agreed repayment dates.

To the extent that interest flows are floating rate, the undiscounted amounts were derived from the interest rates at each balance sheet date.

|                                      | <b>On Demand or<br/>Less than<br/>1 Month<br/>NT\$</b> | <b>1 to 3 Months<br/>NT\$</b> | <b>3 Months to<br/>1 Year<br/>NT\$</b> | <b>1 to 5 Years<br/>NT\$</b> | <b>More than<br/>5 Years<br/>NT\$</b> |
|--------------------------------------|--------------------------------------------------------|-------------------------------|----------------------------------------|------------------------------|---------------------------------------|
| <hr/> December 31, 2018 <hr/>        |                                                        |                               |                                        |                              |                                       |
| Non-derivative financial liabilities |                                                        |                               |                                        |                              |                                       |
| Non-interest bearing                 | \$ 33,156,044                                          | \$ 34,493,000                 | \$ 6,899,093                           | \$ 57,375                    | \$ 196,523                            |
| Floating interest rate liabilities   | 15,762,004                                             | 7,127,606                     | 25,510,718                             | 131,014,040                  | -                                     |
| Fixed interest rate liabilities      | <u>7,677,097</u>                                       | <u>4,811,536</u>              | <u>242,461</u>                         | <u>13,621,814</u>            | <u>4,367,546</u>                      |
|                                      | <u>\$ 56,495,145</u>                                   | <u>\$ 46,432,142</u>          | <u>\$ 32,652,272</u>                   | <u>\$ 144,693,229</u>        | <u>\$ 4,564,069</u>                   |
| <hr/> December 31, 2017 <hr/>        |                                                        |                               |                                        |                              |                                       |
| Non-derivative financial liabilities |                                                        |                               |                                        |                              |                                       |
| Non-interest bearing                 | \$ 30,695,797                                          | \$ 18,387,296                 | \$ 4,549,468                           | \$ 2,807                     | \$ 176,199                            |
| Floating interest rate liabilities   | 6,641,541                                              | 4,153,830                     | 5,101,178                              | 27,196,245                   | 900,310                               |
| Fixed interest rate liabilities      | <u>8,522,765</u>                                       | <u>7,526,270</u>              | <u>1,526,449</u>                       | <u>11,902,335</u>            | <u>6,462,396</u>                      |
|                                      | <u>\$ 45,860,103</u>                                   | <u>\$ 30,067,396</u>          | <u>\$ 11,177,095</u>                   | <u>\$ 39,101,387</u>         | <u>\$ 7,538,905</u>                   |

The amounts included above for floating interest rate instruments for non-derivative financial liabilities was subject to change if changes in floating interest rates differ from those estimates of interest rates determined at each balance sheet date.

The following table detailed the Group's liquidity analysis for its derivative financial instruments. The table was based on the undiscounted contractual net cash inflows and outflows on derivative instruments that settle on a net basis, and the undiscounted gross cash inflows and outflows on those derivatives that require gross settlement. When the amounts payable or receivable are not fixed, the amounts disclosed have been determined by reference to the projected interest rates as illustrated by the yield curves at each balance sheet date.

|                            | <b>On Demand or<br/>Less than<br/>1 Month<br/>NT\$</b> | <b>1 to 3 Months<br/>NT\$</b> | <b>3 Months to<br/>1 Year<br/>NT\$</b> |
|----------------------------|--------------------------------------------------------|-------------------------------|----------------------------------------|
| <u>December 31, 2018</u>   |                                                        |                               |                                        |
| Net settled                |                                                        |                               |                                        |
| Forward exchange contracts | \$ 2,040                                               | \$ 1,620                      | \$ -                                   |
| Gross settled              |                                                        |                               |                                        |
| Forward exchange contracts |                                                        |                               |                                        |
| Inflows                    | \$ 2,580,194                                           | \$ 466,489                    | \$ -                                   |
| Outflows                   | (2,556,607)                                            | (460,725)                     | -                                      |
|                            | <u>23,587</u>                                          | <u>5,764</u>                  | <u>-</u>                               |
| Swap contracts             |                                                        |                               |                                        |
| Inflows                    | 14,136,620                                             | 9,214,500                     | 38,160,316                             |
| Outflows                   | (13,946,583)                                           | (8,650,320)                   | (36,596,419)                           |
|                            | <u>190,037</u>                                         | <u>564,180</u>                | <u>1,563,897</u>                       |
|                            | <u>\$ 213,624</u>                                      | <u>\$ 569,944</u>             | <u>\$ 1,563,897</u>                    |
| <u>December 31, 2017</u>   |                                                        |                               |                                        |
| Net settled                |                                                        |                               |                                        |
| Forward exchange contracts | \$ (8,820)                                             | \$ -                          | \$ -                                   |
| Gross settled              |                                                        |                               |                                        |
| Forward exchange contracts |                                                        |                               |                                        |
| Inflows                    | \$ 3,711,302                                           | \$ 2,169,093                  | \$ 390,379                             |
| Outflows                   | (3,679,154)                                            | (2,138,635)                   | (386,880)                              |
|                            | <u>32,148</u>                                          | <u>30,458</u>                 | <u>3,499</u>                           |
| Swap contracts             |                                                        |                               |                                        |
| Inflows                    | 12,116,531                                             | 14,434,880                    | 36,676,224                             |
| Outflows                   | (12,189,576)                                           | (14,629,738)                  | (36,452,398)                           |
|                            | <u>(73,045)</u>                                        | <u>(194,858)</u>              | <u>223,826</u>                         |
|                            | <u>\$ (40,897)</u>                                     | <u>\$ (164,400)</u>           | <u>\$ 227,325</u>                      |

### 37. RELATED PARTY TRANSACTIONS

Balances and transactions within the Group had been eliminated upon consolidation. Details of transactions between the Group and other related parties were disclosed as follows:

#### a. Related parties

In addition to those disclosed in Note 15, the related parties were as follows:

| <b>Related Parties</b>                  | <b>Relationship with the Company</b> |
|-----------------------------------------|--------------------------------------|
| ASE Cultural and Educational Foundation | Substantial related party            |

- b. The Group contributed NT\$100,000 thousand to ASE Cultural and Educational Foundation in 2018 and 2017, respectively, for environmental charity in promoting the related domestic environmental protection and public service activities (Note 39).
- c. In the third quarter of 2016, the Group acquired patents and specific technology from DECA at NT\$403,543 thousand which was primarily based on independent professional appraisal reports. As of December 31, 2018 and 2017, NT\$57,590 thousand and NT\$93,000 thousand have not been paid and were accrued under the line item of other payables, respectively.
- d. As disclosed in Note 32, USIE repurchased its own 1,283 thousand ordinary shares from the Group's key management personnel in February 2018 with approximately NT\$ 653,244 thousand.
- e. Compensation to key management personnel

|                              | <b>For the Year Ended December 31</b> |                   |
|------------------------------|---------------------------------------|-------------------|
|                              | <b>2018</b>                           | <b>2017</b>       |
|                              | <b>NT\$</b>                           | <b>NT\$</b>       |
| Short-term employee benefits | \$ 1,041,216                          | \$ 860,631        |
| Post-employment benefits     | 3,884                                 | 2,858             |
| Share-based payments         | <u>9,145</u>                          | <u>-</u>          |
|                              | <u>\$ 1,054,245</u>                   | <u>\$ 863,489</u> |

The compensation to the Group's key management personnel is according to personal performance and market trends.

### 38. ASSETS PLEDGED AS COLLATERAL OR FOR SECURITY

The following assets were provided as collateral for bank borrowings and the tariff guarantees of imported raw materials:

|                                                            | <b>December 31</b>   |                      |
|------------------------------------------------------------|----------------------|----------------------|
|                                                            | <b>2018</b>          | <b>2017</b>          |
|                                                            | <b>NT\$</b>          | <b>NT\$</b>          |
| Inventories related to real estate business                | \$ 4,796,126         | \$ 4,822,043         |
| Investment properties                                      | 6,680,017            | 7,151,382            |
| Land use rights (long-term prepayments for lease)          | 6,515,576            | 6,813,751            |
| Other financial assets (including current and non-current) | <u>496,902</u>       | <u>66,726</u>        |
|                                                            | <u>\$ 18,488,621</u> | <u>\$ 18,853,902</u> |

### 39. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

In addition to those disclosed in other notes, significant commitments and contingencies of the Group as of each balance sheet date were as follows:

- 1) As of December 31, 2018 and 2017, unused letters of credit of the Group were approximately NT\$634,000 thousand and NT\$20,000 thousand, respectively.
- 2) As of December 31, 2018 and 2017, outstanding commitments to purchase property, plant and equipment of the Group were approximately NT\$17,039,458 thousand and NT\$7,019,377 thousand, respectively, of which NT\$2,339,308 thousand and NT\$294,194 thousand had been prepaid,

respectively. As of December 31, 2018 and 2017, the commitment that the Group has contracted for the construction related to our real estate business were approximately NT\$888,052 thousand and NT\$1,548,806 thousand, respectively.

- 3) In consideration of corporate social responsibility for environmental protection, the Group's board of directors, in December 2013, approved contributions to be made in the next 30 years, at a total amount of NT\$3,000,000 thousand, at the minimum, to environmental protection efforts in Taiwan.

In February 2019, ASE's board of directors approved to contribute NT\$100,000 thousand to ASE Cultural and Educational Foundation for environmental charity in promoting the related domestic environmental protection and public service activities continuously.

#### 40. SIGNIFICANT ASSETS AND LIABILITIES DENOMINATED IN FOREIGN CURRENCIES

The following information was aggregated by the foreign currencies other than functional currencies of the group entities and the exchange rates between foreign currencies and respective functional currencies were disclosed. The significant financial assets and liabilities denominated in foreign currencies were as follows:

|                                | Foreign<br>Currencies<br>(In Thousand) | Exchange Rate    | Carrying<br>Amount<br>(In Thousand) |
|--------------------------------|----------------------------------------|------------------|-------------------------------------|
| <hr/> December 31, 2018 <hr/>  |                                        |                  |                                     |
| Monetary financial assets      |                                        |                  |                                     |
| US\$                           | \$ 3,730,484                           | US\$1=NT\$30.715 | \$ 114,581,814                      |
| US\$                           | 1,299,391                              | US\$1=CNY6.8632  | 39,910,801                          |
| JPY                            | 4,412,591                              | JPY1=NT\$0.2782  | 1,227,583                           |
| JPY                            | 6,568,657                              | JPY1=US\$0.0091  | 1,827,400                           |
| Monetary financial liabilities |                                        |                  |                                     |
| US\$                           | 3,361,523                              | US\$1=NT\$30.715 | 103,249,185                         |
| US\$                           | 1,216,654                              | US\$1=CNY6.8632  | 37,369,521                          |
| JPY                            | 7,401,621                              | JPY1=NT\$0.2782  | 2,059,131                           |
| JPY                            | 7,035,704                              | JPY1=US\$0.0091  | 1,957,333                           |
| <hr/> December 31, 2017 <hr/>  |                                        |                  |                                     |
| Monetary financial assets      |                                        |                  |                                     |
| US\$                           | 3,065,296                              | US\$1=NT\$29.76  | 91,223,195                          |
| US\$                           | 1,193,369                              | US\$1=CNY6.5342  | 35,514,653                          |
| JPY                            | 5,005,435                              | JPY1=NT\$0.2642  | 1,322,436                           |
| JPY                            | 8,113,284                              | JPY1=US\$0.0089  | 2,143,530                           |
| Monetary financial liabilities |                                        |                  |                                     |
| US\$                           | 2,902,995                              | US\$1=NT\$29.76  | 86,393,137                          |
| US\$                           | 1,007,629                              | US\$1=CNY6.5342  | 29,987,042                          |
| JPY                            | 5,415,677                              | JPY1=NT\$0.2642  | 1,430,822                           |
| JPY                            | 8,598,832                              | JPY1=US\$0.0089  | 2,271,811                           |

The significant realized and unrealized foreign exchange gains (losses) were as follows:

| Functional Currencies | For the Year Ended December 31 |                                        |                 |                                        |
|-----------------------|--------------------------------|----------------------------------------|-----------------|----------------------------------------|
|                       | 2018                           |                                        | 2017            |                                        |
|                       | Exchange Rate                  | Net Foreign<br>Exchange Gain<br>(Loss) | Exchange Rate   | Net Foreign<br>Exchange Gain<br>(Loss) |
|                       |                                | NT\$                                   |                 | NT\$                                   |
| US\$                  | US\$1=NT\$30.715               | \$ (67,476)                            | US\$1=NT\$29.76 | (244,802)                              |
| NT\$                  |                                | (849,234)                              |                 | 4,130,243                              |
| CNY                   | CNY1=NT\$4.4753                | (120,005)                              | CNY1=NT\$4.5545 | (337,630)                              |
|                       |                                | <u>\$ (1,036,715)</u>                  |                 | <u>\$ 3,547,811</u>                    |

#### 41. ADDITIONAL DISCLOSURES

The following are the additional disclosures required by the Securities and Futures Bureau for the Group:

- a. Financial provided: Please see Table 1 attached;
- b. Endorsement/guarantee provided: Please see Table 2 attached;
- c. Marketable securities held (excluding investments in subsidiaries, associates and joint venture): Please see Table 3 attached;
- d. Marketable securities acquired and disposed of at costs or prices of at least NT\$300 million or 20% of the paid-in capital: Please see Table 4 attached;
- e. Acquisition of individual real estate properties at costs of at least NT\$300 million or 20% of the paid-in capital: Please see Table 5 attached;
- f. Disposal of individual real estate properties at prices of at least NT\$300 million or 20% of the paid-in capital: None;
- g. Total purchase from or sales to related parties of at least NT\$100 million or 20% of the paid-in capital: Please see Table 6 attached;
- h. Receivables from related parties amounting to at least NT\$100 million or 20% of the paid-in capital: Please see Table 7 attached;
- i. Information about the derivative financial instruments transaction: Please see Note 7;
- j. Others: The business relationship between the parent and the subsidiaries and significant transactions between them: Please see Table 10 attached;
- k. Names, locations, and related information of investees over which the Group exercises significant influence (excluding information on investment in mainland China): Please see Table 8 attached;
- l. Information on investment in mainland China
  - 1) The name of the investee in mainland China, the main businesses and products, its issued capital, method of investment, information on inflow or outflow of capital, percentage of ownership, income (losses) of the investee, share of profits/losses of investee, ending balance, amount received as dividends from the investee, and the limitation on investee: Please see Table 9 attached;

- 2) Any of the following significant transactions with investee companies in mainland China, either directly or indirectly through a third party, and their prices, payment terms, and unrealized gains or losses:
- The amount and percentage of purchases and the balance and percentage of the related payables at the end of the period: Please see Table 6 attached;
  - The amount and percentage of sales and the balance and percentage of the related receivables at the end of the period: Please see Table 6 attached;
  - The amount of property transactions and the amount of the resultant gains or losses: No significant transactions;
  - The balance of negotiable instrument endorsements or guarantees or pledges of collateral at the end of the period and the purposes: None;
  - The highest balance, the end of period balance, the interest rate range, and total current period interest with respect to financing of funds: Please see Table 1 attached;
  - Other transactions that have a material effect on the profit or loss for the period or on the financial position, such as the rendering or receiving of services: None.

## 42. OPERATING SEGMENTS INFORMATION

The Group has the following reportable segments: Packaging, Testing and EMS. The Group packages bare semiconductors into finished semiconductors with enhanced electrical and thermal characteristics; provides testing services, including front-end engineering testing, wafer probing and final testing services; engages in the designing, assembling, manufacturing and sale of electronic components and telecommunications equipment motherboards. Information about other business activities and operating segments that are not reportable are combined and disclosed in "Others." The Group engages in other activities such as substrate production as well as sale and leasing of real estate properties.

The accounting policies for segments are the same as those described in Note 4. The measurement basis for resources allocation and performance evaluation is based on profit before income tax.

Segment information for the years ended December 31, 2018 and 2017 was as follows:

### a. Segment revenues and operating results

|                                                          | Packaging<br>NT\$ | Testing<br>NT\$ | EMS<br>NT\$    | Others<br>NT\$ | Adjustment and<br>Elimination<br>NT\$ | Total<br>NT\$  |
|----------------------------------------------------------|-------------------|-----------------|----------------|----------------|---------------------------------------|----------------|
| <u>For the year ended December 31, 2018</u>              |                   |                 |                |                |                                       |                |
| Revenue from external customers                          | \$ 178,308,222    | \$ 35,903,202   | \$ 151,890,384 | \$ 4,990,613   | \$ -                                  | \$ 371,092,421 |
| Inter-segment revenue (Note 1)                           | 3,531,431         | 212,310         | 58,836,465     | 7,637,053      | (70,217,259)                          | -              |
| Segment revenue                                          | 181,839,653       | 36,115,512      | 210,726,849    | 12,627,666     | -                                     | 441,309,680    |
| Interest income                                          | 166,761           | 55,108          | 354,343        | 352,232        | (462,233)                             | 466,211        |
| Interest expense                                         | (3,647,601)       | (101,338)       | -              | (249,180)      | 462,233                               | (3,535,886)    |
| Depreciation and amortization                            | (29,491,977)      | (9,560,610)     | (2,065,590)    | (1,570,726)    | -                                     | (42,688,903)   |
| Share of profit or loss of associates and joint ventures | (497,560)         | (23,398)        | -              | -              | -                                     | (520,958)      |
| Impairment loss                                          | (654,081)         | -               | -              | -              | -                                     | (654,081)      |
| Segment profit before income tax                         | 17,976,191        | 7,952,484       | 6,225,984      | (107,221)      | -                                     | 32,047,438     |
| Expenditures for segment assets                          | 22,787,190        | 12,991,023      | 2,529,771      | 784,254        | -                                     | 39,092,238     |
| <u>December 31, 2018</u>                                 |                   |                 |                |                |                                       |                |
| Investments accounted for using the equity method        | 9,117,371         | 160,018         | -              | -              | -                                     | 9,277,389      |
| Contract assets                                          | 3,488,372         | 1,000,128       | -              | -              | -                                     | 4,488,500      |

(Continued)



|                                                          | <b>Packaging</b> | <b>Testing</b> | <b>EMS</b>     | <b>Others</b> | <b>Adjustment and</b> | <b>Total</b>   |
|----------------------------------------------------------|------------------|----------------|----------------|---------------|-----------------------|----------------|
|                                                          | <b>NT\$</b>      | <b>NT\$</b>    | <b>NT\$</b>    | <b>NT\$</b>   | <b>Elimination</b>    | <b>NT\$</b>    |
|                                                          | <b>NT\$</b>      | <b>NT\$</b>    | <b>NT\$</b>    | <b>NT\$</b>   | <b>NT\$</b>           | <b>NT\$</b>    |
| <b>For the year ended December 31, 2017</b>              |                  |                |                |               |                       |                |
| Revenue from external customers                          | \$ 126,225,119   | \$ 26,157,277  | \$ 133,948,016 | \$ 4,110,796  | \$ -                  | \$ 290,441,208 |
| Inter-segment revenue (Note 1)                           | 4,911,026        | 184,707        | 47,119,404     | 8,383,640     | (60,598,777)          | -              |
| Segment revenue                                          | 131,136,145      | 26,341,984     | 181,067,420    | 12,494,436    | -                     | 351,039,985    |
| Interest income                                          | 43,744           | 48,532         | 269,640        | 214,265       | (269,310)             | 306,871        |
| Interest expense                                         | (1,969,562)      | (11,920)       | -              | (62,714)      | 269,310               | (1,774,886)    |
| Depreciation and amortization                            | (19,105,457)     | (6,476,743)    | (2,133,253)    | (1,489,733)   | -                     | (29,205,186)   |
| Share of profit or loss of associates and joint ventures | 476,526          | (42,509)       | -              | -             | -                     | 434,017        |
| Impairment loss                                          | (218,214)        | (72,798)       | -              | (473,869)     | -                     | (764,881)      |
| Segment profit before income tax                         | 11,973,539       | 6,904,067      | 6,883,327      | 5,167,965     | -                     | 30,928,898     |
| Expenditures for segment assets                          | 17,769,612       | 4,507,097      | 850,235        | 550,737       | -                     | 23,677,681     |
| <b>December 31, 2017</b>                                 |                  |                |                |               |                       |                |
| Investments accounted for using the equity method        | 48,501,847       | 187,418        | -              | -             | -                     | 48,689,265     |

(Concluded)

Note 1: Inter-segment revenue were eliminated upon consolidation.

Note 2: Refer to the table above for information about disaggregation of revenue.

b. Revenue from major products and services

|                                             | <b>For the Year Ended December 31</b> |                       |
|---------------------------------------------|---------------------------------------|-----------------------|
|                                             | <b>2018</b>                           | <b>2017</b>           |
|                                             | <b>NT\$</b>                           | <b>NT\$</b>           |
| Packaging service                           | \$ 178,308,222                        | \$ 126,225,119        |
| Testing service                             | 35,903,202                            | 26,157,277            |
| Electronic components manufacturing service | 151,890,384                           | 133,948,016           |
| Others                                      | <u>4,990,613</u>                      | <u>4,110,796</u>      |
|                                             | <u>\$ 371,092,421</u>                 | <u>\$ 290,441,208</u> |

c. Geographical information

Geographical information about revenue from external customers and noncurrent assets are reported based on the country where the external customers are headquartered and noncurrent assets are located, respectively.

1) Net revenues from external customers

|               | <b>For the Year Ended December 31</b> |                       |
|---------------|---------------------------------------|-----------------------|
|               | <b>2018</b>                           | <b>2017</b>           |
|               | <b>NT\$</b>                           | <b>NT\$</b>           |
| United States | \$ 230,791,164                        | \$ 196,462,345        |
| Taiwan        | 45,630,792                            | 35,413,647            |
| Asia          | 56,031,108                            | 30,201,332            |
| Europe        | 36,844,258                            | 26,445,240            |
| Others        | <u>1,795,099</u>                      | <u>1,918,644</u>      |
|               | <u>\$ 371,092,421</u>                 | <u>\$ 290,441,208</u> |

- 2) Non-current assets, excluding financial instruments, post-employment benefit assets and deferred tax assets

|        |  | <b>December 31</b>           |                              |
|--------|--|------------------------------|------------------------------|
|        |  | <b>2018</b>                  | <b>2017</b>                  |
|        |  | <b>NT\$</b>                  | <b>NT\$</b>                  |
| Taiwan |  | \$ 229,288,700               | \$ 93,350,839                |
| China  |  | 59,058,239                   | 45,376,164                   |
| Others |  | <u>25,686,256</u>            | <u>25,025,498</u>            |
|        |  | <u><u>\$ 314,033,195</u></u> | <u><u>\$ 163,752,501</u></u> |

d. Major customers

Except one customer from which the operating revenues generated from packaging and EMS segments were NT\$92,117,839 thousand and NT\$83,873,393 thousand in 2018 and 2017, respectively, the Group did not have other single customer to which the operating revenues exceeded 10% of operating revenues for the years ended December 31, 2018 and 2017.

**TABLE 1**

**ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES**

**FINANCINGS PROVIDED  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(Amounts In Thousands of New Taiwan Dollars)**

| No. | Financing Company      | Counter-party                                | Financial Statement Account                                                          | Related Party | Maximum Balance for the year | Ending Balance | Amount Actual Drawn | Interest Rate | Nature for Financing              | Transaction Amounts | Reason for Financing | Allowance for Bad Debt | Collateral |       | Financing Limits for Each Borrowing Company (Note 1) | Financing Company's Total Financing Amount Limits (Note 2) |
|-----|------------------------|----------------------------------------------|--------------------------------------------------------------------------------------|---------------|------------------------------|----------------|---------------------|---------------|-----------------------------------|---------------------|----------------------|------------------------|------------|-------|------------------------------------------------------|------------------------------------------------------------|
|     |                        |                                              |                                                                                      |               |                              |                |                     |               |                                   |                     |                      |                        | Item       | Value |                                                      |                                                            |
| 1   | A.S.E. Holding Limited | ASE                                          | Other receivables from related parties                                               | Yes           | \$ 2,569,160                 | \$ 1,842,900   | \$ 1,842,900        | 2.46~3.43     | The need for short-term financing | \$ -                | Operating capital    | \$ -                   | -          | \$ -  | \$ 6,586,607                                         | \$ 6,586,607                                               |
|     |                        | J & R Holding Limited                        | Long-term receivables from related parties                                           | Yes           | 1,985,260                    | -              | -                   | 1.96~2.28     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
| 2   | J & R Holding Limited  | ASE                                          | Other receivables from related parties                                               | Yes           | 12,286,000                   | 12,286,000     | 12,193,855          | 2.20~3.92     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 23,214,096                                           | 23,214,096                                                 |
|     |                        | Global Advanced Packaging Technology Limited | Other receivables from related parties                                               | Yes           | 1,145,335                    | 1,136,455      | 522,155             | 1.96~2.75     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | ASE WeiHai Inc.                              | Other receivables from related parties                                               | Yes           | 671,485                      | -              | -                   | 1.88~2.52     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | Omniquiest Industrial Limited                | Long-term receivables from related parties                                           | Yes           | 3,058,650                    | 1,228,600      | 30,715              | 1.96~2.75     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | ASE Assembly & Test (Shanghai) Limited       | Other receivables from related parties                                               | Yes           | 496,315                      | -              | -                   | 1.89~2.42     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | Anstock Limited                              | Other receivables from related parties                                               | Yes           | 1,107,024                    | 413,965        | 288,657             | 2.90~5.80     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | Innosource Limited                           | Other receivables from related parties                                               | Yes           | 731,163                      | 3,072          | 3,072               | 1.96~2.75     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | ASE Corporation                              | Long-term receivables from related parties                                           | Yes           | 3,065,475                    | -              | -                   | 1.96~2.92     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | ASE Labuan Inc.                              | Long-term receivables from related parties                                           | Yes           | 582,600                      | -              | -                   | 1.96          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | ASE Investment (Labuan) Inc.                 | Long-term receivables from related parties                                           | Yes           | 1,238,200                    | 1,228,600      | 30,715              | 2.30~2.75     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        |                                              |                                                                                      |               |                              |                |                     |               |                                   |                     |                      |                        |            |       |                                                      |                                                            |
| 3   | ASE Test Limited       | ASE                                          | Other receivables from related parties                                               | Yes           | 5,839,000                    | 4,453,675      | 4,453,675           | 2.46~3.43     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 13,977,728                                           | 13,977,728                                                 |
|     |                        | A.S.E. Holding Limited                       | Other receivables from related parties                                               | Yes           | 1,083,425                    | 1,075,025      | 1,075,025           | 1.96~2.75     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | Omniquiest Industrial Limited                | Long-term receivables from related parties                                           | Yes           | 29,195                       | -              | -                   | 1.96~2.28     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | ASE Investment (Labuan) Inc.                 | Long-term receivables from related parties                                           | Yes           | 467,120                      | -              | -                   | 1.96~2.28     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                        | J & R Holding Limited                        | Long-term receivables from related parties                                           | Yes           | 8,295,940                    | 8,231,620      | 7,801,610           | 1.96~2.84     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
| 4   | ASE Test, Inc.         | ASE                                          | Other receivables from related parties                                               | Yes           | 5,400,000                    | -              | -                   | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 11,788,281                                           | 11,788,281                                                 |
|     |                        | ASE Investment (Labuan) Inc.                 | Other receivables from related parties                                               | Yes           | 1,198,000                    | -              | -                   | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 11,788,281                                           | 11,788,281                                                 |
|     |                        | Omniquiest Industrial Limited                | Other receivables from related parties                                               | Yes           | 1,198,000                    | -              | -                   | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 11,788,281                                           | 11,788,281                                                 |
|     |                        | Global Advanced Packaging Technology Limited | Other receivables from related parties                                               | Yes           | 592,100                      | -              | -                   | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 11,788,281                                           | 11,788,281                                                 |
|     |                        | ASE Embedded Electronics Inc.                | Other receivables from related parties                                               | Yes           | 620,000                      | -              | -                   | -             | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 11,788,281                                           | 11,788,281                                                 |
|     |                        | The Company                                  | Other receivables from related parties                                               | Yes           | 11,400,000                   | 11,400,000     | 8,000,000           | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 11,788,281                                           | 11,788,281                                                 |
| 5   | J&R Industrial Inc.    | ASE                                          | Other receivables from related parties                                               | Yes           | 400,000                      | 400,000        | 400,000             | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 403,152                                              | 403,152                                                    |
|     |                        | ASE Electronics Inc.                         | Other receivables from related parties                                               | Yes           | 190,000                      | -              | -                   | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 403,152                                              | 403,152                                                    |
| 6   | ISE Labs, Inc.         | J & R Holding Limited                        | Other receivables from related parties<br>Long-term receivables from related parties | Yes           | 1,485,840                    | 1,474,320      | 1,474,320           | 1.99~3.22     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |

(Continued)

| No. | Financing Company                                    | Counter-party                                        | Financial Statement Account            | Related Party | Maximum Balance for the year | Ending Balance | Amount Actual Drawn | Interest Rate | Nature for Financing              | Transaction Amounts | Reason for Financing | Allowance for Bad Debt | Collateral |       | Financing Limits for Each Borrowing Company (Note 1) | Financing Company's Total Financing Amount Limits (Note 2) |
|-----|------------------------------------------------------|------------------------------------------------------|----------------------------------------|---------------|------------------------------|----------------|---------------------|---------------|-----------------------------------|---------------------|----------------------|------------------------|------------|-------|------------------------------------------------------|------------------------------------------------------------|
|     |                                                      |                                                      |                                        |               |                              |                |                     |               |                                   |                     |                      |                        | Item       | Value |                                                      |                                                            |
| 7   | ASE (Korea) Inc.                                     | ASE                                                  | Other receivables from related parties | Yes           | \$ 3,699,600                 | \$ 3,685,800   | \$ 3,685,800        | 3.56~4.35     | The need for short-term financing | \$ -                | Operating capital    | \$ -                   | -          | \$ -  | \$ 6,690,339                                         | \$ 6,690,339                                               |
| 8   | ASE Japan Co., Ltd.                                  | J & R Holding Limited                                | Other receivables from related parties | Yes           | 2,354,670                    | 1,738,750      | 1,738,750           | 0.45~0.46     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
| 9   | USI Enterprise Limited                               | ASE                                                  | Other receivables from related parties | Yes           | 8,293,050                    | 6,296,575      | 6,296,575           | 2.46~3.43     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 9,318,089                                            | 18,636,178                                                 |
|     |                                                      | USIINC                                               | Other receivables from related parties | Yes           | 2,104,940                    | 2,088,620      | 1,842,900           | 2.46~3.43     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 9,318,089                                            | 18,636,178                                                 |
|     |                                                      | J&R Holding Limited                                  | Other receivables from related parties | Yes           | 4,798,025                    | 4,760,825      | 4,760,825           | 1.96~2.75     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 9,318,089                                            | 18,636,178                                                 |
| 10  | Huntington Holdings International Co.Ltd.            | ASE                                                  | Other receivables from related parties | Yes           | 1,145,335                    | 829,305        | 829,305             | 2.46~3.43     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 9,593,583                                            | 19,187,166                                                 |
|     |                                                      | A.S.E. Holding Limited                               | Other receivables from related parties | Yes           | 379,535                      | -              | -                   | 1.96~2.28     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 9,593,583                                            | 19,187,166                                                 |
| 11  | Anstock Limited                                      | ASE Assembly & Test (Shanghai) Limited               | Other receivables from related parties | Yes           | 996,322                      | 322,222        | 322,222             | 4.19~5.52     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
| 12  | ASE (Kun Shan) Inc.                                  | ASE Investment (Kun Shan) Limited                    | Other receivables from related parties | Yes           | 2,025                        | 2,014          | 2,014               | 4.35          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                                                      | ASE Assembly & Test (Shanghai) Limited               | Other receivables from related parties | Yes           | 671,295                      | 671,295        | 671,295             | 3.92~4.35     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
| 13  | Real Tech Holdings Limited                           | ASE                                                  | Other receivables from related parties | Yes           | 1,702,525                    | 1,689,325      | 1,689,325           | 2.46~3.43     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 9,343,398                                            | 18,686,796                                                 |
|     |                                                      | A.S.E. Holding Limited                               | Other receivables from related parties | Yes           | 437,925                      | -              | -                   | 1.96~2.28     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 9,343,398                                            | 18,686,796                                                 |
| 14  | Shanghai Ding Hui Real Estate Development Co., Ltd.  | Kun Shan Ding Hong Real Estate Development Co., Ltd. | Other receivables from related parties | Yes           | 444,460                      | 223,765        | 223,765             | 4.35          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                                                      | Shanghai Ding Qi Property Management Co., Ltd.       | Other receivables from related parties | Yes           | 59,964                       | 44,753         | 44,753              | 4.35          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                                                      | Shanghai Ding Yu Property Management Co., Ltd.       | Other receivables from related parties | Yes           | 233,460                      | 223,765        | 223,765             | 4.35          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                                                      | Shanghai Ding Wei Real Development Co., Ltd.         | Other receivables from related parties | Yes           | 1,790,120                    | 1,790,120      | 1,790,120           | 4.35          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                                                      | Shanghai Ding Fan Department Store Co.,              | Other receivables from related parties | Yes           | 2,250                        | 2,238          | 2,238               | 4.35          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                                                      |                                                      |                                        |               |                              |                |                     |               |                                   |                     |                      |                        |            |       |                                                      |                                                            |
| 15  | Universal Scientific Industrial (Shanghai) Co., Ltd. | Universal Global Technology (Shanghai) Co., Ltd.     | Other receivables from related parties | Yes           | 4,725,630                    | 3,804,005      | 1,790,120           | 1.75          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 8,434,714                                            | 16,869,427                                                 |
|     |                                                      | Universal Global Technology Co., Limited             | Other receivables from related parties | Yes           | 2,802,060                    | 895,060        | -                   | -             | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 8,434,714                                            | 16,869,427                                                 |
|     |                                                      | Universal Global Electronics (Shanghai) Co., Ltd.    | Other receivables from related parties | Yes           | 450,060                      | 447,530        | -                   | -             | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 8,434,714                                            | 16,869,427                                                 |
|     |                                                      | Universal Global Technology (Kunshan) Co., Ltd.      | Other receivables from related parties | Yes           | 450,060                      | 447,530        | 402,777             | 1.75          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 8,434,714                                            | 16,869,427                                                 |
| 16  | Omniquest Industrial Limited                         | ASE                                                  | Other receivables from related parties | Yes           | 3,058,650                    | -              | -                   | 0.92~3.43     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 6,704,911                                            | 6,704,911                                                  |
| 17  | USI Electronics (Shenzhen) Co., Ltd.                 | Universal Global Technology (Shanghai) Co., Ltd.     | Other receivables from related parties | Yes           | 2,160,288                    | 2,148,144      | 2,148,144           | 1.75          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 2,613,509                                            | 5,227,019                                                  |
|     |                                                      | Universal Global Technology Co., Limited             | Other receivables from related parties | Yes           | 1,868,040                    | 1,700,614      | 1,228,595           | 1.25~2.00     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 2,613,509                                            | 5,227,019                                                  |
|     |                                                      | Universal Global Technology (Kunshan) Co., Ltd.      | Other receivables from related parties | Yes           | 447,530                      | 447,530        | -                   | -             | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 2,613,509                                            | 5,227,019                                                  |
| 18  | ASE Investment (Labuan) Inc.                         | ASE                                                  | Other receivables from related parties | Yes           | 2,715,135                    | -              | -                   | 0.92~2.59     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 6,762,534                                            | 6,762,534                                                  |
| 19  | Global Advanced Packaging Technology Limited         | ASE                                                  | Other receivables from related parties | Yes           | 592,100                      | -              | -                   | 0.92          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 5,937,309                                            | 5,937,309                                                  |

(Continued)

| No. | Financing Company                                | Counter-party                                          | Financial Statement Account                                                          | Related Party | Maximum Balance for the period | Ending Balance | Amount Actual Drawn | Interest Rate | Nature for Financing              | Transaction Amounts | Reason for Financing | Allowance for Bad Debt | Collateral |       | Financing Limits for Each Borrowing Company (Note 1) | Financing Company's Total Financing Amount Limits (Note 2) |
|-----|--------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------|---------------|--------------------------------|----------------|---------------------|---------------|-----------------------------------|---------------------|----------------------|------------------------|------------|-------|------------------------------------------------------|------------------------------------------------------------|
|     |                                                  |                                                        |                                                                                      |               |                                |                |                     |               |                                   |                     |                      |                        | Item       | Value |                                                      |                                                            |
| 20  | ASE Corporation                                  | ASE                                                    | Other receivables from related parties                                               | Yes           | \$ 3,065,475                   | \$ -           | \$ -                | 2.45~3.65     | The need for short-term financing | \$ -                | Operating capital    | \$ -                   | -          | \$ -  | \$ 6,707,837                                         | \$ 6,707,837                                               |
| 21  | ASE Electronics Inc.                             | ASE                                                    | Other receivables from related parties                                               | Yes           | 1,000,000                      | -              | -                   | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 1,415,287                                            | 1,415,287                                                  |
|     |                                                  | The Company                                            | Other receivables from related parties                                               | Yes           | 700,000                        | 700,000        | 700,000             | 0.74          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 1,415,287                                            | 1,415,287                                                  |
| 22  | Universal Global Technology (Kunshan) Co., Ltd.  | Universal Global Technology (Shanghai) Co., Ltd.       | Other receivables from related parties                                               | Yes           | 467,010                        | -              | -                   | -             | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 879,870                                              | 1,759,740                                                  |
|     |                                                  | Universal Global Electronics (Shanghai) Co., Ltd.      | Other receivables from related parties                                               | Yes           | 138,108                        | 134,259        | -                   | -             | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 879,870                                              | 1,759,740                                                  |
| 23  | ASE Labuan Inc.                                  | ASE                                                    | Other receivables from related parties                                               | Yes           | 582,600                        | -              | -                   | 2.46          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 1,422,201                                            | 1,422,201                                                  |
| 24  | Innosource Limited                               | ASE                                                    | Other receivables from related parties                                               | Yes           | 728,250                        | -              | -                   | 2.46          | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 1,813,801                                            | 1,813,801                                                  |
| 25  | Advanced Semiconductor Engineering (China) Ltd.  | ASE Assembly & Test (Shanghai) Limited                 | Other receivables from related parties<br>Long-term receivables from related parties | Yes           | 1,052,470                      | 1,044,310      | 844,663             | 1.89~3.20     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
|     |                                                  | ASE WeiHai Inc.                                        | Other receivables from related parties                                               | Yes           | 958,400                        | 614,300        | 614,300             | 2.03~2.76     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
| 26  | ASE Singapore Pte. Ltd.                          | J & R Holding Limited                                  | Long-term receivables from related parties                                           | Yes           | 464,325                        | 460,725        | 460,725             | 2.69~3.21     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 20,302,335                                           | 30,453,503                                                 |
| 27  | Universal Global Scientific Industrial Co., Ltd. | Universal Scientific Industrial De Mexico S.A. De C.V. | Other receivables from related parties                                               | Yes           | 1,021,515                      | 1,013,595      | 1,013,595           | 2.75~3.05     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 1,179,652                                            | 2,359,304                                                  |
| 28  | Universal Global Technology Co., Limited         | Universal Global Electronics Co., Ltd.                 | Other receivables from related parties                                               | Yes           | 371,460                        | 368,580        | -                   | -             | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 2,912,703                                            | 5,825,407                                                  |
|     |                                                  | Universal Scientific Industrial De Mexico S.A. De C.V. | Other receivables from related parties                                               | Yes           | 2,166,850                      | 2,150,050      | 767,875             | 3.02~3.09     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 2,912,703                                            | 5,825,407                                                  |
| 29  | Universal Scientific Industrial Co., Ltd.        | Universal Scientific Industrial De Mexico S.A. De C.V. | Other receivables from related parties                                               | Yes           | 433,370                        | 430,010        | 430,010             | 2.98~3.05     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 506,889                                              | 1,013,778                                                  |
| 30  | ASE                                              | The Company                                            | Other receivables from related parties                                               | Yes           | 45,000,000                     | 39,600,000     | 29,900,000          | 0.82~0.96     | The need for short-term financing | -                   | Operating capital    | -                      | -          | -     | 42,857,234                                           | 42,857,234                                                 |

(Concluded)

Note 1: Except USI Enterprise Limited, Huntington Holdings International Co., Ltd., Real Tech Holdings Limited, Universal Scientific Industrial (Shanghai) Co., Ltd., USI Electronics (Shenzhen) Co., Ltd., Universal Global Technology (Kunshan) Co., Ltd., Universal Global Scientific Industrial Co., Ltd., Universal Global Technology Co., Limited, and Universal Scientific Industrial Co., Ltd. whose limit amount of lending to a company shall not exceed 20% of the net worth of the company, the rest of subsidiaries' limit amount of lending to a company shall not exceed 40% of the net worth of the company.

Note 2: Where an inter-company or inter-firm short-term financing facility is necessary provided that the total amount of such financing facility shall not exceed 40% of the net worth of the lending company. Foreign subsidiaries whose voting shares are 100% owned directly or indirectly, by the Company as a lender, the total amount lending to a company shall not exceed 15% and 10% of the net worth of the Company.

Note 3: Amount was eliminated based on the audited financial statements.

ENDORSEMENTS/GUARANTEES PROVIDED  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(Amounts In Thousands of New Taiwan Dollars, Unless Specified Otherwise)

|     | Endorsement/<br>Guarantee Provider | Guaranteed Party |                                                        | Limits on Endorsement<br>/Guarantee Amount<br>Provided to Each<br>Guaranteed Party (Note 1) | Maximum Balance<br>for the Year (Note 3) | Ending Balance<br>(Note 3) | Amount Actually<br>Drawn (Note 3) | Amount of Endorsement/<br>Guarantee Collateralized<br>by Properties | Ratio of Accumulated<br>Endorsement/Guarantee to<br>Net Equity per Latest<br>Financial Statement (%) | Maximum<br>Endorsement<br>/Guarantee Amount<br>Allowable (Note 2) | Guarantee<br>Provided by<br>Parent Company | Guarantee<br>Provided by<br>A Subsidiary | Guarantee<br>Provided to<br>Subsidiaries<br>in Mainland China |
|-----|------------------------------------|------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------|----------------------------|-----------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------|------------------------------------------|---------------------------------------------------------------|
| No. | Name                               | Name             | Nature of Relationship                                 |                                                                                             |                                          |                            |                                   |                                                                     |                                                                                                      |                                                                   |                                            |                                          |                                                               |
| 1   | ASE                                | The Company      | 100% voting shares<br>directly owned by<br>the Company | \$ 150,000,318                                                                              | \$ 90,124,067                            | \$ 55,075,819              | \$ 55,075,819                     | \$ -                                                                | 51.4                                                                                                 | \$ 160,714,626                                                    | No                                         | Yes                                      | No                                                            |

Note 1: The ceilings on the amounts for any single entity is permitted to make in endorsements/guarantees shall not exceed 140% of total equity of shareholders according to “The Process of make in endorsements/guarantees” of the Company.

Note 2: The ceilings on the aggregate amounts are permitted to make in endorsements/guarantees shall not exceed 150% of total equity of shareholders according to “The Process of make in endorsements/guarantees” of the Company.

Note 3: Amount includes principal and interest.

**TABLE 3**

**ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES**

**MARKETABLE SECURITIES HELD  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(Amounts In Thousands of New Taiwan Dollars, Unless Specified Otherwise)**

| Held Company Name | Marketable Securities Type and Name                        | Relationship with the Company | Financial Statement Account                                     | December 31, 2018 |                |                             |            | Note |
|-------------------|------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------|-------------------|----------------|-----------------------------|------------|------|
|                   |                                                            |                               |                                                                 | Shares/ Units     | Carrying Value | Percentage of Ownership (%) | Fair Value |      |
| ASE               | Stock                                                      |                               |                                                                 |                   |                |                             |            |      |
|                   | H&D Venture Capital Investment Corporation                 | -                             | Financial assets at FVTOCI - non current                        | 968,276           | \$ 10,768      | 13                          | \$ 10,768  |      |
|                   | MiTAC Information Technology Corp                          | -                             | Financial assets at FVTOCI - non current                        | 2,521             | 21             | -                           | 21         |      |
|                   | Asia Pacifical Emerging Industry Venture Capital Co, Ltd.  | -                             | Financial assets at FVTOCI - non current                        | 6,000,000         | 37,444         | 7                           | 37,444     |      |
|                   | StarChips Technology Inc.                                  | -                             | Financial assets at FVTOCI - non current                        | 333,334           | -              | 6                           | -          |      |
|                   | Bond                                                       |                               |                                                                 |                   |                |                             |            |      |
|                   | AMPI Third Private of Domestic Unsecured Convertible Bonds | -                             | Financial assets at fair value through profit or loss - current | 1,000             | 100,496        | -                           | 100,496    |      |
| ASE Test, Inc.    | Limited Liability Partnership                              |                               |                                                                 |                   |                |                             |            |      |
|                   | Ripley Cable Holdings I, L.P.                              | -                             | Financial assets at FVTOCI - non current                        | -                 | 12,610         | 4                           | 12,610     |      |
|                   | Stock                                                      |                               |                                                                 |                   |                |                             |            |      |
|                   | The Company                                                | Ultimate parent company       | Financial assets at FVTOCI - non current                        | 5,489,388         | 320,031        | -                           | 320,031    |      |
|                   | Powertec Energy Corporation                                | -                             | Financial assets at FVTOCI - non current                        | 33,560,184        | 214,974        | 3                           | 214,974    |      |
|                   | MiTAC Information Technology Corp                          | -                             | Financial assets at FVTOCI - non current                        | 680,017           | 5,730          | 1                           | 5,730      |      |
|                   | HSBC Holdings Ltd                                          | -                             | Financial assets at fair value through profit or loss - current | 400,000           | 101,632        | -                           | 101,632    |      |
|                   | Tencent Holdings Ltd                                       | -                             | Financial assets at fair value through profit or loss - current | 194,000           | 238,852        | -                           | 238,852    |      |
|                   | Industrial and Commercial Bank of China Limited            | -                             | Financial assets at fair value through profit or loss - current | 11,000,000        | 241,102        | -                           | 241,102    |      |
|                   | Ping An Insurance (Group) Company of China, Ltd.           | -                             | Financial assets at fair value through profit or loss - current | 1,000,000         | 271,137        | -                           | 271,137    |      |
|                   | China Construction Bank Corporation                        | -                             | Financial assets at fair value through profit or loss - current | 10,402,000        | 263,479        | -                           | 263,479    |      |
|                   | AIA Group Limited                                          | -                             | Financial assets at fair value through profit or loss - current | 300,000           | 76,460         | -                           | 76,460     |      |
|                   | China Merchants Bank Co., Ltd.                             | -                             | Financial assets at fair value through profit or loss - current | 2,200,000         | 247,572        | -                           | 247,572    |      |
|                   | China Life Insurance Company Limited                       | -                             | Financial assets at fair value through profit or loss - current | 1,000,000         | 65,245         | -                           | 65,245     |      |
|                   | BYD Company Limited                                        | -                             | Financial assets at fair value through profit or loss - current | 162,000           | 31,728         | -                           | 31,728     |      |
|                   | Geely Automobile Holdings Ltd.                             | -                             | Financial assets at fair value through profit or loss - current | 400,000           | 21,644         | -                           | 21,644     |      |
|                   | AAC Technologies Holdings Inc.                             | -                             | Financial assets at fair value through profit or loss - current | 480,000           | 85,541         | -                           | 85,541     |      |
|                   | BOC Hong Kong (Holdings) Ltd.                              | -                             | Financial assets at fair value through profit or loss - current | 1,900,000         | 216,792        | -                           | 216,792    |      |
|                   | Sunny Optical Technology (Group) Co. Ltd.                  | -                             | Financial assets at fair value through profit or loss - current | 300,000           | 81,870         | -                           | 81,870     |      |
|                   | China Overseas Land & Investment Ltd.                      | -                             | Financial assets at fair value through profit or loss - current | 500,000           | 52,737         | -                           | 52,737     |      |
|                   | China Mobile Ltd.                                          | -                             | Financial assets at fair value through profit or loss - current | 600,000           | 177,268        | -                           | 177,268    |      |

(Continued)



| Held Company Name             | Marketable Securities Type and Name                                                                                  | Relationship with the Company | Financial Statement Account                                         | December 31, 2018 |                      |                             |                      | Note |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------|-------------------|----------------------|-----------------------------|----------------------|------|
|                               |                                                                                                                      |                               |                                                                     | Shares/ Units     | Carrying Value       | Percentage of Ownership (%) | Fair Value           |      |
|                               | CK Hutchison Holdings Limited                                                                                        | -                             | Financial assets at fair value through profit or loss - current     | 200,000           | \$ 58,972            | -                           | \$ 58,972            |      |
|                               | Agricultural Bank of China Limited                                                                                   | -                             | Financial assets at fair value through profit or loss - current     | 16,300,000        | 219,219              | -                           | 219,219              |      |
|                               | Bank of China Ltd.                                                                                                   | -                             | Financial assets at fair value through profit or loss - current     | 16,700,000        | 221,325              | -                           | 221,325              |      |
|                               | China Vanke Co., Ltd.                                                                                                | -                             | Financial assets at fair value through profit or loss - current     | 400,000           | 41,719               | -                           | 41,719               |      |
|                               | CSPC Pharmaceutical Group Limited                                                                                    | -                             | Financial assets at fair value through profit or loss - current     | 1,400,000         | 62,030               | -                           | 62,030               |      |
|                               | Country Garden Holdings Co. Ltd.                                                                                     | -                             | Financial assets at fair value through profit or loss - current     | 1,400,000         | 52,314               | -                           | 52,314               |      |
|                               | Country Garden Services Holdings Company Limited                                                                     | -                             | Financial assets at fair value through profit or loss - current     | 160,920           | 7,849                | -                           | 7,849                |      |
|                               | CITIC Securities Company Limited                                                                                     | -                             | Financial assets at fair value through profit or loss - current     | 200,000           | 10,587               | -                           | 10,587               |      |
|                               | Anhui Conch Cement Company Limited                                                                                   | -                             | Financial assets at fair value through profit or loss - current     | 999,915           | 131,026              | -                           | 131,026              |      |
|                               | Preferred share<br>HanTech Venture Capital Corporation                                                               | -                             | Financial assets at fair value through profit or loss - non current | 25,000,000        | 275,000              | 25                          | 275,000              |      |
|                               | Fund<br>CTBC Global Real Estate Income Fund-A                                                                        | -                             | Financial assets at fair value through profit or loss - current     | 2,500,000         | 22,650               | -                           | 22,650               |      |
|                               | Corporate bond<br>Nan Shan Life Insurance Co., Ltd. 1st Perpetual Unsecured Subordinate Corporate Bond Issue in 2016 | -                             | Financial assets at FVTOCI - non current                            | 1,000             | 1,016,924            | -                           | 1,016,924            |      |
|                               | Fund<br>Taishin Ta Chong Money Market Fund                                                                           | -                             | Financial assets at fair value through profit or loss - current     | 32,254,983        | 457,521              | -                           | 457,521              |      |
|                               | Jih Sun Money Market Fund                                                                                            | -                             | Financial assets at fair value through profit or loss - current     | 4,755,144         | 70,345               | -                           | 70,345               |      |
|                               | Hua Nan Kirin Money Market Fund                                                                                      | -                             | Financial assets at fair value through profit or loss - current     | 2,616,592         | 31,284               | -                           | 31,284               |      |
| Luchu Development Corporation | Stock<br>Powerchip Technology Corporation                                                                            | -                             | Financial assets at FVTOCI - non current                            | 1,813,855         | 58,664               | -                           | 58,664               |      |
| A.S.E. Holding Limited        | Stock<br>Global Strategic Investment Inc.                                                                            | -                             | Financial assets at FVTOCI - non current                            | 490,000           | US\$ 374 thousand    | 3                           | US\$ 374 thousand    |      |
|                               | SiPhoton, Inc.                                                                                                       | -                             | Financial assets at FVTOCI - non current                            | 544,800           | -                    | 4                           | -                    |      |
|                               | Global Strategic Investment, Inc. (Samoa)                                                                            | -                             | Financial assets at FVTOCI - non current                            | 869,891           | US\$ 247 thousand    | 2                           | US\$ 247 thousand    |      |
| J & R Holding Limited         | Stock<br>The Company                                                                                                 | Ultimate parent company       | Financial assets at FVTOCI - non current                            | 23,351,881        | US\$ 44,324 thousand | 1                           | US\$ 44,324 thousand |      |
|                               | Limited Liability Partnership<br>Crimson Velocity Fund, L.P.                                                         | -                             | Financial assets at FVTOCI - non current                            | -                 | US\$ 325 thousand    | -                           | US\$ 325 thousand    |      |
|                               | H&QAP Greater China Growth Fund, L.P.                                                                                | -                             | Financial assets at FVTOCI - non current                            | -                 | US\$ 556 thousand    | 8                           | US\$ 556 thousand    |      |
| ASE Test Limited              | Stock<br>The Company                                                                                                 | Ultimate parent company       | Financial assets at FVTOCI - non current                            | 44,100,236 (Note) | US\$ 83,706 thousand | 1                           | US\$ 83,706 thousand |      |

(Continued)



| Held Company Name                          | Marketable Securities Type and Name              | Relationship with the Company | Financial Statement Account                                         | December 31, 2018 |                     |                             |                     | Note |
|--------------------------------------------|--------------------------------------------------|-------------------------------|---------------------------------------------------------------------|-------------------|---------------------|-----------------------------|---------------------|------|
|                                            |                                                  |                               |                                                                     | Shares/ Units     | Carrying Value      | Percentage of Ownership (%) | Fair Value          |      |
| USIINC                                     | Stock                                            |                               |                                                                     |                   |                     |                             |                     |      |
|                                            | Universal Venture Capital Investment Corporation | -                             | Financial assets at FVTOCI - non current                            | 6,200,000         | \$ 33,205           | 5                           | \$ 33,205           |      |
|                                            | Gapertise Inc.                                   | -                             | Financial assets at FVTOCI - non current                            | 275,000           | -                   | 4                           | -                   |      |
|                                            | WellySun Inc.                                    | -                             | Financial assets at FVTOCI - non current                            | 108,000           | 1,198               | -                           | 1,198               |      |
| Huntington Holdings International Co. Ltd. | Plasmag Technology Inc.                          | -                             | Financial assets at FVTOCI - non current                            | 733,000           | -                   | 2                           | -                   |      |
|                                            | Stock                                            |                               |                                                                     |                   |                     |                             |                     |      |
|                                            | Superactive Group Company Limited                | -                             | Financial assets at fair value through profit or loss - current     | 5,548,800         | US\$ 220 thousand   | -                           | US\$ 220 thousand   |      |
|                                            | Cadence Design SYS Inc.                          | -                             | Financial assets at fair value through profit or loss - current     | 9,633             | US\$ 419 thousand   | -                           | US\$ 419 thousand   |      |
|                                            | Solid Gain Invenstments Ltd.                     | -                             | Financial assets at FVTOCI - non current                            | 1,291,400         | US\$ 426 thousand   | 20                          | US\$ 426 thousand   |      |
|                                            | Preferred Stock                                  |                               |                                                                     |                   |                     |                             |                     |      |
|                                            | Techgains I Corporation                          | -                             | Financial assets at FVTOCI - non current                            | 518,316           | US\$ 171 thousand   | 10                          | US\$ 171 thousand   |      |
| Unitech Holdings International Co., Ltd.   | Techgains II Corporation                         | -                             | Financial assets at FVTOCI - non current                            | 653,998           | US\$ 106 thousand   | 4                           | US\$ 106 thousand   |      |
|                                            | Stock                                            |                               |                                                                     |                   |                     |                             |                     |      |
|                                            | Superactive Group Company Limited                | -                             | Financial assets at fair value through profit or loss - current     | 5,613,600         | US\$ 222 thousand   | -                           | US\$ 222 thousand   |      |
|                                            | WacomCo., Ltd.                                   | -                             | Financial assets at fair value through profit or loss - non-current | 1,200,000         | US\$ 4,956 thousand | 1                           | US\$ 4,956 thousand |      |
|                                            | Sequans Communications SA                        | -                             | Financial assets at fair value through profit or loss - non-current | 370,554           | US\$ 289 thousand   | -                           | US\$ 289 thousand   |      |
|                                            | Asia Global Venture Co., Ltd.                    | -                             | Financial assets at FVTOCI - non current                            | 1,000,000         | US\$ 550 thousand   | 10                          | US\$ 550 thousand   |      |
|                                            | Preferred Stock                                  |                               |                                                                     |                   |                     |                             |                     |      |
| USI Enterprise Limited                     | MoBagel, Inc.                                    | -                             | Financial assets at FVTOCI - non current                            | 54,000            | US\$ 5 thousand     | 1                           | US\$ 5 thousand     |      |
|                                            | Beneficiary Certificate                          |                               |                                                                     |                   |                     |                             |                     |      |
| USISH                                      | All-Stars Investment Private Partners Fund L.P.  | -                             | Financial assets at fair value through profit or loss - non-current | 6,493,316         | US\$ 6,515 thousand | 3                           | US\$ 6,515 thousand |      |
|                                            | Stock                                            |                               |                                                                     |                   |                     |                             |                     |      |
|                                            | Industrial and Commercial Bank of China Limited  | -                             | Financial assets at fair value through profit or loss - current     | 14,000,000        | CNY 68,571 thousand | -                           | CNY 68,571 thousand |      |
| Universal Global Technology Co., Limited   | China Construction Bank Corporation              | -                             | Financial assets at fair value through profit or loss - current     | 8,686,000         | CNY 49,165 thousand | -                           | CNY 49,165 thousand |      |
|                                            | Stock                                            |                               |                                                                     |                   |                     |                             |                     |      |
|                                            | China Construction Bank Corporation              | -                             | Financial assets at fair value through profit or loss - current     | 5,000,000         | US\$ 4,124 thousand | -                           | US\$ 4,124 thousand |      |
|                                            | AIA Group Limited                                | -                             | Financial assets at fair value through profit or loss - current     | 100,000           | US\$ 830 thousand   | -                           | US\$ 830 thousand   |      |
|                                            | China Merchants Bank Co., Ltd.                   | -                             | Financial assets at fair value through profit or loss - current     | 790,000           | US\$ 2,895 thousand | -                           | US\$ 2,895 thousand |      |
|                                            | China Life Insurance Company Limited             | -                             | Financial assets at fair value through profit or loss - current     | 1,200,000         | US\$ 2,549 thousand | -                           | US\$ 2,549 thousand |      |
|                                            | Tencent Holdings Ltd.                            | -                             | Financial assets at fair value through profit or loss - current     | 184,000           | US\$ 7,376 thousand | -                           | US\$ 7,376 thousand |      |
|                                            | BOC Hong Kong (Holdings) Limited                 | -                             | Financial assets at fair value through profit or loss - current     | 400,000           | US\$ 1,486 thousand | -                           | US\$ 1,486 thousand |      |
|                                            | Industrial and Commercial Bank of China Limited  | -                             | Financial assets at fair value through profit or loss - current     | 1,000,000         | US\$ 714 thousand   | -                           | US\$ 714 thousand   |      |
|                                            | Bank of China Limited                            | -                             | Financial assets at fair value through profit or loss - current     | 4,000,000         | US\$ 1,726 thousand | -                           | US\$ 1,726 thousand |      |

(Continued)

| Held Company Name | Marketable Securities Type and Name                 | Relationship with the Company | Financial Statement Account                                         | December 31, 2018 |                     |                             |                     | Note |
|-------------------|-----------------------------------------------------|-------------------------------|---------------------------------------------------------------------|-------------------|---------------------|-----------------------------|---------------------|------|
|                   |                                                     |                               |                                                                     | Shares/ Units     | Carrying Value      | Percentage of Ownership (%) | Fair Value          |      |
|                   | Agricultural Bank of China Limited                  | -                             | Financial assets at fair value through profit or loss - current     | 4,000,000         | US\$ 1,752 thousand | -                           | US\$ 1,752 thousand |      |
|                   | Ping An Insurance (Group) Company of China, Ltd.    | -                             | Financial assets at fair value through profit or loss - current     | 920,000           | US\$ 8,122 thousand | -                           | US\$ 8,122 thousand |      |
|                   | CSPC Pharmaceutical Group Limited                   | -                             | Financial assets at fair value through profit or loss - current     | 1,362,000         | US\$ 1,965 thousand | -                           | US\$ 1,965 thousand |      |
|                   | Country Garden Holdings Co. Ltd.                    | -                             | Financial assets at fair value through profit or loss - current     | 1,000,000         | US\$ 1,217 thousand | -                           | US\$ 1,217 thousand |      |
|                   | PAX Global Technology Limited                       | -                             | Financial assets at fair value through profit or loss - current     | 1,000             | US\$ - thousand     | -                           | US\$ - thousand     |      |
|                   | Hi Sun Technology (China) Limited                   | -                             | Financial assets at fair value through profit or loss - current     | 3,000             | US\$ - thousand     | -                           | US\$ - thousand     |      |
|                   | Alibaba Group Holding Ltd.                          | -                             | Financial assets at fair value through profit or loss - current     | 52,000            | US\$ 7,128 thousand | -                           | US\$ 7,128 thousand |      |
|                   | AAC Technologies Holdings Inc.                      | -                             | Financial assets at fair value through profit or loss - current     | 200,000           | US\$ 1,160 thousand | -                           | US\$ 1,160 thousand |      |
|                   | Country Garden Services Holdings Company Limited    | -                             | Financial assets at fair value through profit or loss - current     | 114,942           | US\$ 183 thousand   | -                           | US\$ 183 thousand   |      |
|                   | Anhui Conch Cement Company Limited                  | -                             | Financial assets at fair value through profit or loss - current     | 999,968           | US\$ 4,266 thousand | -                           | US\$ 4,266 thousand |      |
| UGTW              | Stock<br>TriKnight Capital Corporation              | -                             | Financial assets at FVTOCI - non current                            | 21,000,000        | \$ 120,984          | 5                           | \$ 120,984          |      |
| SPIL              | Stock<br>ASM Advanced Packaging Materials Pte. Ltd. | -                             | Financial assets at fair value through profit or loss - non current | 4,224,808         | -                   | 14                          | -                   |      |

(Concluded)

Note: The Company’s stocks held by ASE Test Limited, 44,100,236 shares, are all trusted without power to decide the allocation of the trust assets.

**TABLE 4**

**ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES**

**MARKETABLE SECURITIES ACQUIRED AND DISPOSED OF AT COSTS OR PRICES OF AT LEAST NT\$300 MILLION OR 20% OF THE PAID-IN CAPITAL  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(Amounts In Thousands of New Taiwan Dollars)**

| Company Name                                                 | Marketable Securities<br>Type and Name                               | Financial Statement Account                                        | Counter-party | Nature of<br>Relationship | Beginning Balance |                          | Acquisition  |                       | Disposal      |                      |                      |                       | Ending Balance          |                        |
|--------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------|---------------|---------------------------|-------------------|--------------------------|--------------|-----------------------|---------------|----------------------|----------------------|-----------------------|-------------------------|------------------------|
|                                                              |                                                                      |                                                                    |               |                           | Shares/Units      | Amount (Note 1)          | Shares/Units | Amount                | Shares/Units  | Amount               | Carrying Value       | Gain/Loss on Disposal | Shares/Units            | Amount (Note 1)        |
| ASE                                                          | Capital<br>USI Inc.                                                  | Investments accounted for using<br>the equity method               | -             | -                         | 1,364,736,682     | \$ 44,181,137            | 10,937,134   | \$ 382,800            | 1,757,334,372 | \$ -                 | \$ 32,912,748        | \$ -                  | -                       | \$ -                   |
| J & R Holding<br>Limited                                     | Capital<br>Suzhou ASEN Semiconductors<br>Co., Ltd.                   | Investments accounted for using<br>the equity method               | (Note 6)      | (Note 6)                  | -                 | US\$ 99,324 thousand     | -            | US\$ 127,113 thousand | -             | US\$ 95,335 thousand | US\$ 95,335 thousand | -                     | -                       | US\$ 128,808 thousand  |
| Shanghai Ding Hui<br>Real Estate<br>Development<br>Co., Ltd. | Capital<br>Shanghai Ding Wei Real<br>Estate Development<br>Co., Ltd. | Investments accounted for using<br>the equity method               | (Note 2)      | -                         | -                 | CNY 1,453,890 thousand   | -            | CNY 250,000 thousand  | -             | -                    | -                    | -                     | -                       | CNY 1,590,462 thousand |
| USISH                                                        | Stock                                                                |                                                                    |               |                           |                   |                          |              |                       |               |                      |                      |                       |                         |                        |
|                                                              | Ping An Insurance (Group)<br>Company of China, Ltd.                  | Financial assets at fair value through<br>profit or loss - current | -             | -                         | 1,700,000         | CNY 58,199 thousand      | -            | -                     | 1,700,000     | CNY 125,303 thousand | CNY 58,199 thousand  | CNY 67,250 thousand   | -                       | -                      |
|                                                              | Tencent Holdings Ltd.                                                | Financial assets at fair value through<br>profit or loss - current | -             | -                         | 320,000           | CNY 60,001 thousand      | -            | -                     | 320,000       | CNY 116,692 thousand | CNY 60,001 thousand  | CNY 56,913 thousand   | -                       | -                      |
|                                                              | AIA Group Limited                                                    | Financial assets at fair value through<br>profit or loss - current | -             | -                         | 1,440,000         | CNY 67,466 thousand      | -            | -                     | 1,440,000     | CNY 78,300 thousand  | CNY 67,466 thousand  | CNY 10,976 thousand   | -                       | -                      |
|                                                              | Capital<br>Universal Global Technology<br>Co., Limited               | Investments accounted for using<br>the equity method               | (Note 2)      | -                         | 777,716,500       | CNY 2,505,757 thousand   | 553,249,035  | CNY 487,233 thousand  | -             | -                    | -                    | -                     | 1,330,965,535           | CNY 3,254,133 thousand |
| SPIIL                                                        | Capital<br>ChipMOS Technologies Inc.                                 | Investments accounted for using<br>the equity method               | (Note 3)      | -                         | 156,045,540       | \$ 4,135,207<br>(Note 4) | 19,159,000   | \$ 451,563            | -             | -                    | -                    | -                     | 148,910,390<br>(Note 5) | \$ 4,192,924           |
| SPIIL(Cayman)<br>Holding Limited                             | Capital<br>Siliconware Electronics<br>(Fujian) Co., Limited          | Investments accounted for using<br>the equity method               | (Note 2)      | -                         | 45,000,000        | 1,344,589<br>(Note 4)    | 45,000,000   | 1,383,750             | -             | -                    | -                    | -                     | 90,000,000              | 2,642,056              |

Note 1: The ending balance of investment accounted for using the equity method including share of profits/losses of investees and other adjustment related to equity.

Note 2: Cash capital increase.

Note 3: Acquired from open market.

Note 4: The Company indirectly acquired shares of ChipMOS Technologies Inc. through SPIIL following the acquisition of 100% shareholdings of SPIIL in accordance with the joint share exchange agreement on April 30, 2018.

Note 5: ChipMOS Technologies Inc. has completed the registration formalities of cash capital reduction. Here is the number of shares held after capital reduction.

Note 6: Purchased from NXP B.V., sold to Beijing Unis Capital Management Co., Ltd., and the two companies were not related party of the Group.

TABLE 5

ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

ACQUISITION OF INDIVIDUAL REAL ESTATE AT COSTS OF AT LEAST NT\$300 MILLION OR 20% OF THE PAID-IN CAPITAL  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(Amounts In Thousands of New Taiwan Dollars)

| Company Name                                        | Types of Property                       | Transaction Date                       | Transaction Date<br>(Tax excluded) | Payment Term                                                     | Counter-party                                                              | Nature of<br>Relationships | Prior Transaction of Related Counter-party |               |               |        | Price Reference                                                     | Purpose of<br>Acquisition             | Other<br>Terms |
|-----------------------------------------------------|-----------------------------------------|----------------------------------------|------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------|--------------------------------------------|---------------|---------------|--------|---------------------------------------------------------------------|---------------------------------------|----------------|
|                                                     |                                         |                                        |                                    |                                                                  |                                                                            |                            | Owner                                      | Relationships | Transfer Date | Amount |                                                                     |                                       |                |
| ASE                                                 | Facilities and equipment of the company | January 1, 2018 -<br>December 31, 2018 | \$ 303,454                         | There is 66,124 thousand will<br>be paid after acceptance check. | Acter Co., Ltd.                                                            | -                          | -                                          | -             | -             | \$ -   | Request for quotation,<br>price comparison<br>and price negotiation | Facilities and equipment<br>expansion | None           |
| Siliconware<br>Electronics (Fujian)<br>Co., Limited | Land use right                          | November 13, 2018                      | 376,455                            | Has been paid fully                                              | Jinjian Municipal<br>Bureau of Land<br>and Resources in<br>Fujian Province | -                          | -                                          | -             | -             | -      | Bidding                                                             | For operating purpose                 | None           |

TABLE 6

## ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

**TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES OF AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(Amounts In Thousands of New Taiwan Dollars)**

| Buyer                                           | Related Party                                        | Relationships           | Transaction Details |              |            |                                                                 | Abnormal Transaction |               | Notes/Accounts Payable or Receivable |            | Note |
|-------------------------------------------------|------------------------------------------------------|-------------------------|---------------------|--------------|------------|-----------------------------------------------------------------|----------------------|---------------|--------------------------------------|------------|------|
|                                                 |                                                      |                         | Purchases/<br>Sales | Amount       | % to Total | Payment Terms                                                   | Unit Price           | Payment Terms | Ending Balance                       | % to Total |      |
|                                                 |                                                      |                         |                     |              |            |                                                                 |                      |               |                                      |            |      |
| ASE                                             | ASE (Shanghai) Inc.                                  | Subsidiary              | Purchases           | \$ 1,485,294 | 4          | Net 60 days from the end of the month of when invoice is issued | \$ -                 | -             | \$ (456,877 )                        | (5 )       | Note |
|                                                 | ASE Electronics Inc.                                 | Subsidiary              | Purchases           | 1,867,454    | 5          | Net 60 days from the end of the month of when invoice is issued | -                    | -             | (491,279 )                           | (5 )       | Note |
|                                                 | ASE Test, Inc.                                       | Subsidiary              | Purchases           | 105,022      | -          | Net 60 days from the end of the month of when invoice is issued | -                    | -             | (37 )                                | -          | Note |
|                                                 | Universal Scientific Industrial Co., Ltd.            | Consolidated subsidiary | Sales               | (3,219,194 ) | (3 )       | Net 60 days from the end of the month of when invoice is issued | -                    | -             | 1,019,084                            | 5          | Note |
| ASE Assembly & Test (Shanghai) Limited          | Advanced Semiconductor Engineering (HK) Limited      | Consolidated subsidiary | Purchases           | 308,023      | 11         | Net 45 days from invoice date                                   | -                    | -             | (61,947 )                            | (15 )      | Note |
| Advanced Semiconductor Engineering (HK) Limited | ASE (Shanghai) Inc.                                  | Parent company          | Purchases           | 1,639,296    | 100        | Net 90 days from the end of the month of when invoice is issued | -                    | -             | (398,179 )                           | (100 )     | Note |
|                                                 | ASE Assembly & Test (Shanghai) Limited               | Consolidated subsidiary | Sales               | (308,023 )   | (18 )      | Net 45 days from invoice date                                   | -                    | -             | 61,947                               | 22         | Note |
| ASE Electronics (M) Sdn. Bhd.                   | ASE Electronics Inc.                                 | Consolidated subsidiary | Purchases           | 243,905      | 21         | Net 60 days from invoice date                                   | -                    | -             | (33,355 )                            | (10 )      | Note |
| Universal Scientific Industrial Co., Ltd.       | ASE                                                  | Consolidated subsidiary | Purchases           | 3,219,194    | 9          | Net 60 days from the end of the month of when invoice is issued | -                    | -             | (1,019,084 )                         | (30 )      | Note |
|                                                 | Universal Global Scientific Industrial Co., Ltd.     | Parent company          | Purchases           | 426,565      | 3          | T/T 75 days                                                     | -                    | -             | (174,176 )                           | (6 )       | Note |
| ASE (Shanghai) Inc.                             | ASE                                                  | Parent company          | Sales               | (1,485,294 ) | (33 )      | Net 60 days from the end of the month of when invoice is issued | -                    | -             | 456,877                              | 40         | Note |
|                                                 | Advanced Semiconductor Engineering (HK) Limited      | Subsidiary              | Sales               | (1,639,296 ) | (37 )      | Net 90 days from the end of the month of when invoice is issued | -                    | -             | 398,179                              | 35         | Note |
| ASE Electronics Inc.                            | ASE                                                  | Parent company          | Sales               | (1,867,454 ) | (49 )      | Net 60 days from the end of the month of when invoice is issued | -                    | -             | 491,279                              | 51         | Note |
|                                                 | ASE Electronics (M) Sdn. Bhd.                        | Consolidated subsidiary | Sales               | (243,905 )   | (6 )       | Net 60 days from invoice date                                   | -                    | -             | 33,355                               | 3          | Note |
|                                                 | Universal Scientific Industrial (Shanghai) Co., Ltd. | Consolidated subsidiary | Sales               | (260,059 )   | (7 )       | Net 60 days from the end of the month of when invoice is issued | -                    | -             | 84,411                               | 9          | Note |
| ASE Test, Inc.                                  | ASE                                                  | Parent company          | Sales               | (151,712 )   | (1 )       | Net 60 days from the end of the month of when invoice is issued | -                    | -             | 2,616,811                            | 85         | Note |

(Continued)

| Buyer                                                    | Related Party                                            | Relationships                                    | Transaction Details     |               |            |                                                                 | Abnormal Transaction |               | Notes/Accounts Payable or Receivable |            | Note |
|----------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------|-------------------------|---------------|------------|-----------------------------------------------------------------|----------------------|---------------|--------------------------------------|------------|------|
|                                                          |                                                          |                                                  | Purchases/<br>Sales     | Amount        | % to Total | Payment Terms                                                   | Unit Price           | Payment Terms | Ending Balance                       | % to Total |      |
|                                                          |                                                          |                                                  |                         |               |            |                                                                 |                      |               |                                      |            |      |
| USI Electronics (Shenzhen) Co., Ltd.                     | Universal Global Industrial Co., Limited                 | Consolidated subsidiary                          | Purchases               | \$ 3,761,076  | 19         | T/T 75 days                                                     | \$ -                 | -             | \$ (720,201 )                        | ( 13 )     | Note |
|                                                          | Universal Scientific Industrial DE MEXICO S. A. DE C. V. | Consolidated subsidiary                          | Sales                   | (13,263,087 ) | (55 )      | T/T 75 days                                                     | -                    | -             | 3,071,886                            | 54         | Note |
|                                                          |                                                          | Consolidated subsidiary                          | Sales                   | (251,918 )    | (1 )       | T/T 75 days                                                     | -                    | -             | 144,582                              | 3          | Note |
|                                                          |                                                          | Universal Global Technology (Shanghai) Co., Ltd. | Consolidated subsidiary | Purchases     | 134,350    | 1                                                               | T/T 75 days          | -             | -                                    | -          | -    |
|                                                          | Universal Global Scientific Industrial Co., Ltd.         | Consolidated subsidiary                          | Purchases               | 192,545       | 1          | T/T 75 days                                                     | -                    | -             | -                                    | -          | Note |
| Universal Scientific Industrial (Shanghai) Co., Ltd.     | Universal Global Technology Co., Limited                 | Subsidiary                                       | Purchases               | 3,382,320     | 9          | T/T 75 days                                                     | -                    | -             | (942,242 )                           | ( 17 )     | Note |
|                                                          | Universal Global Industrial Co., Limited                 | Subsidiary                                       | Sales                   | (159,007 )    | -          | T/T 75 days                                                     | -                    | -             | 102,064                              | 2          | Note |
|                                                          | Universal Global Technology (Shanghai) Co., Ltd.         | Subsidiary                                       | Purchases               | 482,598       | 1          | T/T 75 days                                                     | -                    | -             | (136,253 )                           | ( 2 )      | Note |
|                                                          |                                                          |                                                  | Sales                   | (264,102 )    | (1 )       | T/T 75 days                                                     | -                    | -             | 52,334                               | 1          | Note |
|                                                          | Universal Global Scientific Industrial Co., Ltd.         | Subsidiary                                       | Purchases               | 238,882       | 1          | T/T 75 days                                                     | -                    | -             | -                                    | -          | Note |
|                                                          | ASE Electronics Inc.                                     | Consolidated subsidiary                          | Purchases               | 260,059       | 1          | Net 60 days from the end of the month of when invoice is issued | -                    | -             | (84,411 )                            | (1 )       | Note |
| Universal Global Technology Co., Limited                 | Universal Scientific Industrial (Shanghai) Co., Ltd.     | Parent company                                   | Sales                   | (3,382,320 )  | (48 )      | T/T 75 days                                                     | -                    | -             | 942,245                              | 43         | Note |
|                                                          | Universal Global Technology (Kunshan) Co., Ltd.          | Consolidated subsidiary                          | Sales                   | (3,495,976 )  | (50 )      | T/T 75 days                                                     | -                    | -             | 1,195,551                            | 55         | Note |
|                                                          | Universal Global Technology (Shanghai) Co., Ltd.         | Consolidated subsidiary                          | Sales                   | (165,751 )    | (2 )       | T/T 75 days                                                     | -                    | -             | 49,166                               | 2          | Note |
| Universal Global Industrial Co., Limited                 | Universal Scientific Industrial (Shanghai) Co., Ltd.     | Parent company                                   | Purchases               | 159,007       | 1          | T/T 75 days                                                     | -                    | -             | (102,064 )                           | (1 )       | Note |
|                                                          | Universal Global Technology (Kunshan) Co., Ltd.          | Consolidated subsidiary                          | Purchases               | 10,770,848    | 39         | T/T 75 days                                                     | -                    | -             | (2,797,715 )                         | (37 )      | Note |
|                                                          | USI Electronics (Shenzhen) Co., Ltd.                     | Consolidated subsidiary                          | Purchases               | 13,263,087    | 48         | T/T 75 days                                                     | -                    | -             | (3,065,945 )                         | (41 )      | Note |
|                                                          |                                                          |                                                  | Sales                   | (3,761,076 )  | (14 )      | T/T 75 days                                                     | -                    | -             | 721,225                              | 10         | Note |
|                                                          | Universal Global Scientific Industrial Co., Ltd.         | Consolidated subsidiary                          | Purchases               | 144,064       | 1          | T/T 75 days                                                     | -                    | -             | (38,426 )                            | (1 )       | Note |
|                                                          |                                                          |                                                  | Sales                   | (21,105,755 ) | (76 )      | T/T 75 days                                                     | -                    | -             | 5,530,892                            | 75         | Note |
| Universal Global Scientific Industrial Co., Ltd.         | Universal Global Industrial Co., Limited                 | Consolidated subsidiary                          | Purchases               | 21,105,755    | 84         | T/T 75 days                                                     | -                    | -             | (5,530,888 )                         | (77 )      | Note |
|                                                          | Universal Scientific Industrial Co., Ltd.                | Subsidiary                                       | Sales                   | (144,064 )    | -          | T/T 75 days                                                     | -                    | -             | 38,456                               | -          | Note |
|                                                          |                                                          |                                                  | Sales                   | (426,565 )    | (1 )       | T/T 75 days                                                     | -                    | -             | 174,176                              | 2          | Note |
|                                                          | Universal Scientific Industrial (Shanghai) Co., Ltd.     | Parent company                                   | Sales                   | (238,882 )    | (1 )       | T/T 75 days                                                     | -                    | -             | -                                    | -          | Note |
|                                                          | USI Electronics (Shenzhen) Co., Ltd.                     | Consolidated subsidiary                          | Sales                   | (192,545 )    | (1 )       | T/T 75 days                                                     | -                    | -             | -                                    | -          | Note |
| Universal Scientific Industrial DE MEXICO S. A. DE C. V. | USI Electronics (Shenzhen) Co., Ltd.                     | Consolidated subsidiary                          | Purchases               | 251,918       | 5          | T/T 75 days                                                     | -                    | -             | (144,576 )                           | -          | Note |

(Continued)



| Buyer                                            | Related Party                                        | Relationships           | Transaction Details |               |            |               | Abnormal Transaction |   | Notes/Accounts Payable or Receivable |            | Note |
|--------------------------------------------------|------------------------------------------------------|-------------------------|---------------------|---------------|------------|---------------|----------------------|---|--------------------------------------|------------|------|
|                                                  |                                                      |                         | Purchases/<br>Sales | Amount        | % to Total | Payment Terms |                      |   | Ending Balance                       | % to Total |      |
|                                                  |                                                      |                         | Unit Price          | Payment Terms |            |               |                      |   |                                      |            |      |
| Universal Global Technology (Kunshan) Co., Ltd.  | Universal Global Technology Co., Limited             | Consolidated subsidiary | Purchases           | \$ 3,495,976  | 22         | T/T 75 days   | \$ -                 | - | \$ (1,195,488 )                      | (24 )      | Note |
|                                                  | Universal Global Industrial Co., Limited             | Consolidated subsidiary | Sales               | (10,770,848 ) | (57 )      | T/T 75 days   | -                    | - | 2,807,620                            | 58         | Note |
| Universal Global Technology (Shanghai) Co., Ltd. | Universal Scientific Industrial (Shanghai) Co., Ltd. | Parent company          | Purchases           | 264,102       | 1          | T/T 75 days   | -                    | - | (52,334 )                            | (1 )       | Note |
|                                                  |                                                      |                         | Sales               | (482,598 )    | (1 )       | T/T 75 days   | -                    | - | 136,253                              | 1          | Note |
|                                                  | Universal Global Technology Co., Limited             | Consolidated subsidiary | Purchases           | 165,751       | -          | T/T 75 days   | -                    | - | (49,166 )                            | (1 )       | Note |
|                                                  | USI Electronics (Shenzhen) Co., Ltd.                 | Consolidated subsidiary | Sales               | (134,350 )    | -          | T/T 75 days   | -                    | - | -                                    | -          | Note |

Note: Amount was eliminated based on the audited financial statements.

(Concluded)

## ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

**RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL  
DECEMBER 31, 2018**
**(Amounts In Thousands of New Taiwan Dollars, Unless Specified Otherwise)**

| Company Name                                           | Related Party                                                          | Relationships                         | Ending Balance (Note 1) | Turnover Rate<br>(Note 2) | Overdue (Note 1) |                      | Amounts Received<br>in Subsequent Period | Allowance for<br>Bad Debts |
|--------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------|-------------------------|---------------------------|------------------|----------------------|------------------------------------------|----------------------------|
|                                                        |                                                                        |                                       |                         |                           | Amount           | Actions Taken        |                                          |                            |
| ASE                                                    | Universal Scientific Industrial Co., Ltd.<br>The Company               | Consolidated subsidiary               | \$ 1,019,084 (Note 5)   | 3                         | \$ 52,623        | Continued collection | \$ 232,864                               | \$ -                       |
|                                                        |                                                                        | The ultimate parent of<br>the company | 29,900,030 (Notes 3,5)  | -                         | 30               | Continued collection | -                                        | -                          |
| ASE Electronics Inc.                                   | ASE<br>The Company                                                     | Parent company                        | 491,877 (Note 5)        | 4                         | -                | -                    | 106,429                                  | -                          |
|                                                        |                                                                        | The ultimate parent of<br>the company | 700,000 (Notes 3,5)     | -                         | -                | -                    | -                                        | -                          |
| ISE Labs, Inc.                                         | J & R Holding Limited                                                  | Parent company                        | 1,475,413 (Notes 3,5)   | -                         | -                | -                    | -                                        | -                          |
| Anstock Limited                                        | ASE Assembly & Test (Shanghai) Limited                                 | Consolidated subsidiary               | 322,523 (Notes 3,5)     | -                         | -                | -                    | -                                        | -                          |
| A.S.E. Holding Limited                                 | ASE                                                                    | Parent company                        | 1,842,900 (Notes 3,5)   | -                         | -                | -                    | -                                        | -                          |
| ASE Test, Inc.                                         | ASE<br>The Company                                                     | Parent company                        | 2,775,816 (Notes 4,5)   | -                         | -                | -                    | -                                        | -                          |
|                                                        |                                                                        | The ultimate parent of<br>the company | 8,000,000 (Notes 3,5)   | -                         | -                | -                    | 200,000                                  | -                          |
| ASE Test Limited                                       | ASE<br>J & R Holding Limited<br>A.S.E. Holding Limited                 | Parent company                        | 4,453,675 (Notes 3,5)   | -                         | -                | -                    | -                                        | -                          |
|                                                        |                                                                        | Parent company                        | 8,029,938 (Notes 3,5)   | -                         | -                | -                    | -                                        | -                          |
|                                                        |                                                                        | Consolidated subsidiary               | 1,129,454 (Notes 3,5)   | -                         | -                | -                    | -                                        | -                          |
| ASE Singapore Pte. Ltd.                                | J & R Holding Limited                                                  | Parent company                        | 461,852 (Notes 3,5)     | -                         | -                | -                    | -                                        | -                          |
| ASE (Korea) Inc.                                       | ASE                                                                    | Parent company                        | 3,686,588 (Notes 3,5)   | -                         | -                | -                    | 614,300                                  | -                          |
| J & R Holding Limited                                  | ASE<br>Global Advanced Packaging Technology Limited<br>Anstock Limited | Parent company                        | 12,193,855 (Notes 3,5)  | -                         | -                | -                    | -                                        | -                          |
|                                                        |                                                                        | Subsidiary                            | 557,625 (Notes 3,5)     | -                         | -                | -                    | -                                        | -                          |
|                                                        |                                                                        | Subsidiary                            | 290,283 (Notes 3,5)     | -                         | -                | -                    | -                                        | -                          |
| J&R Industrial Inc.                                    | ASE                                                                    | Parent company                        | 400,000 (Notes 3,5)     | -                         | -                | -                    | -                                        | -                          |
| ASE Japan Co., Ltd.                                    | J & R Holding Limited                                                  | Parent company                        | 1,739,437 (Notes 3,5)   | -                         | -                | -                    | -                                        | -                          |
| ASE (Shanghai) Inc.                                    | ASE<br>Advanced Semiconductor Engineering (HK)<br>Limited              | Parent company                        | 456,877 (Note 5)        | 3                         | -                | -                    | 42,748                                   | -                          |
|                                                        |                                                                        | Subsidiary                            | 398,179 (Note 5)        | 4                         | -                | -                    | -                                        | -                          |
| ASE (Kun Shan) Inc.                                    | ASE Assembly & Test (Shanghai) Limited                                 | Parent company                        | 671,663 (Notes 3,5)     | -                         | 671,663          | Continued collection | -                                        | -                          |
| Advanced Semiconductor Engineering (China)<br>Ltd.     | ASE Assembly & Test (Shanghai) Limited<br>ASE WeiHai Inc.              | Consolidated subsidiary               | 846,558 (Notes 3,5)     | -                         | -                | -                    | 1,193                                    | -                          |
|                                                        |                                                                        | Consolidated subsidiary               | 618,040 (Notes 3,5)     | -                         | -                | -                    | 188,878                                  | -                          |
| Shanghai Ding Hui Real Estate Development<br>Co., Ltd. | Shanghai Ding Wei Real Estate Development<br>Co., Ltd.                 | Subsidiary                            | 1,803,095 (Notes 3,5)   | -                         | -                | -                    | 3,769                                    | -                          |
|                                                        | Kun Shan Ding Hong Real Estate Development<br>Co., Ltd.                | Subsidiary                            | 225,491 (Notes 3,5)     | -                         | -                | -                    | -                                        | -                          |
|                                                        | Shanghai Ding Yu Real Estate Development<br>Co., Ltd.                  | Subsidiary                            | 230,320 (Notes 3,5)     | -                         | -                | -                    | -                                        | -                          |

(Continued)



| Company Name                                         | Related Party                                          | Relationships           | Ending Balance ( Note 1 ) | Turnover Rate<br>( Note 2 ) | Overdue ( Note 1 ) |                      | Amounts Received<br>in Subsequent Period | Allowance for<br>Bad Debts |
|------------------------------------------------------|--------------------------------------------------------|-------------------------|---------------------------|-----------------------------|--------------------|----------------------|------------------------------------------|----------------------------|
|                                                      |                                                        |                         |                           |                             | Amount             | Actions Taken        |                                          |                            |
| Huntington Holdings International Co. Ltd.           | ASE                                                    | Parent company          | \$ 829,305 (Notes 3,5)    | -                           | \$ -               | -                    | \$ -                                     | \$ -                       |
| Real Tech Holdings Limited                           | ASE                                                    | Parent company          | 1,689,325 (Notes 3,5)     | -                           | -                  | -                    | -                                        | -                          |
| USI Enterprise Limited                               | ASE                                                    | Parent company          | 6,296,575 (Notes 3,5)     | -                           | -                  | -                    | -                                        | -                          |
|                                                      | J & R Holding Limited                                  | Consolidated subsidiary | 4,779,767 (Notes 3,5)     | -                           | -                  | -                    | 11,672                                   | -                          |
|                                                      | USI Inc.                                               | Parent company          | 1,849,621 (Notes 3,5)     | -                           | -                  | -                    | -                                        | -                          |
| USI Electronics (Shenzhen) Co., Ltd.                 | Universal Global Industrial Co., Limited               | Consolidated subsidiary | 3,098,858 (Note 5)        | 5                           | -                  | -                    | 1,154,506                                | -                          |
|                                                      | Universal Global Technology Co., Limited               | Parent company          | 1,228,936 (Notes 3,5)     | -                           | -                  | -                    | -                                        | -                          |
|                                                      | Universal Global Technology (Shanghai) Co., Ltd.       | Consolidated subsidiary | 2,162,973 (Notes 3,5)     | 6                           | -                  | -                    | -                                        | -                          |
|                                                      | Universal Scientific Industrial De Mexico S.A. De C.V. | Consolidated subsidiary | 144,582 (Note 5)          | -                           | -                  | -                    | 130,094                                  | -                          |
| Universal Scientific Industrial (Shanghai) Co., Ltd. | Universal Global Technology (Shanghai) Co., Ltd.       | Subsidiary              | 1,849,919 (Notes 3,5)     | 3                           | -                  | -                    | -                                        | -                          |
|                                                      | Universal Global Technology (Kunshan) Co., Ltd.        | Subsidiary              | 412,932 (Notes 3,5)       | 2                           | -                  | -                    | 416                                      | -                          |
|                                                      | Universal Global Industrial Co., Limited               | Subsidiary              | 106,600 (Note 5)          | 3                           | -                  | -                    | 14,907                                   | -                          |
| Universal Global Technology Co., Limited             | Universal Scientific Industrial (Shanghai) Co., Ltd.   | Parent company          | 942,245 (Note 5)          | 3                           | -                  | -                    | 292,192                                  | -                          |
|                                                      | Universal Global Technology (Kunshan) Co., Ltd.        | Consolidated subsidiary | 1,195,551 (Note 5)        | 3                           | -                  | -                    | 258,620                                  | -                          |
|                                                      | Universal Scientific Industrial De Mexico S.A. De C.V. | Subsidiary              | 767,875 (Note 5)          | -                           | -                  | -                    | -                                        | -                          |
| Universal Global Industrial Co., Limited             | USI Electronics (Shenzhen) Co., Ltd.                   | Consolidated subsidiary | 723,404 (Note 5)          | 5                           | -                  | -                    | 153,667                                  | -                          |
|                                                      | Universal Global Scientific Industrial Co., Ltd.       | Consolidated subsidiary | 5,601,665 (Note 5)        | 4                           | 163,904            | Continued collection | 2,066,290                                | -                          |
| Universal Global Scientific Industrial Co., Ltd.     | Universal Scientific Industrial De Mexico S.A. De C.V. | Consolidated subsidiary | 1,015,053 (Notes 3,5)     | 110                         | -                  | -                    | 4                                        | -                          |
|                                                      | Universal Scientific Industrial Co., Ltd.              | Subsidiary              | 174,583 (Note 5)          | 3                           | 32,613             | Continued collection | 74,889                                   | -                          |
| Universal Scientific Industrial Co., Ltd.            | Universal Scientific Industrial De Mexico S.A. De C.V. | Consolidated subsidiary | 430,010 (Notes 3,5)       | -                           | -                  | -                    | -                                        | -                          |
|                                                      | ASE                                                    | Parent company          | 136,683 (Note 5)          | 3                           | -                  | -                    | 2,876                                    | -                          |
| Universal Global Technology (Kunshan)                | Universal Global Industrial Co., Limited               | Consolidated subsidiary | 2,821,367 (Note 5)        | 4                           | -                  | -                    | 1,025,008                                | -                          |
| Universal Global Technology (Shanghai) Co., Ltd.     | Universal Global Industrial Co., Limited               | Consolidated subsidiary | 170,456 (Note 5)          | 7                           | -                  | -                    | -                                        | -                          |

(Concluded)

Note 1: Include Accounts receivables and other receivables.

Note 2: Exclude other receivables.

Note 3: Intercompany Loan, please refer to Table 1.

Note 4: Turnkey transaction.

Note 5: All the transactions had been eliminated when preparing consolidated financial statements.

TABLE 8

## ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

**NAMES, LOCATION, AND RELATED INFORMATION OF INVESTEEES OVER WHICH THE COMPANY EXERCISES SIGNIFICANT INFLUENCE  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(Amounts In Thousands of New Taiwan Dollars, Unless Specified Otherwise)**

| Investor Company             | Investee Company                             | Location               | Main Businesses and Products                                                                                                           | Original Investment Amount |                       | Balance as of December 31, 2018 |                            |                         | Net Income<br>(Losses) of the Investee | Share of Profits/Losses<br>of Investee (Note 1) | Note       |
|------------------------------|----------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------|---------------------------------|----------------------------|-------------------------|----------------------------------------|-------------------------------------------------|------------|
|                              |                                              |                        |                                                                                                                                        | December 31, 2018          | December 31, 2017     | Shares                          | Percentage of<br>Ownership | Carrying Value          |                                        |                                                 |            |
| The Company                  | ASE                                          | Taiwan                 | Engaged in the packaging and testing of semiconductors and EMS                                                                         | \$ 174,352,839             | \$ -                  | 5,528,783,764                   | 100                        | \$ 102,841,802          | \$ 15,112,814                          | \$ 15,064,021                                   | Subsidiary |
|                              | SPIL                                         | Taiwan                 | Engaged in assembly, testing and turnkey services of integrated circuits                                                               | 173,657,530                | -                     | 3,391,748,878                   | 100                        | 161,020,782             | 7,824,233                              | 3,526,516                                       | Subsidiary |
|                              | USI Global Inc.                              | Taiwan                 | Investment activities                                                                                                                  | 31,080,000                 | -                     | 30,000,000                      | 100                        | 33,113,607              | 435,975                                | 435,975                                         | Subsidiary |
| ASE                          | A.S.E. Holding Limited                       | Bermuda                | Investment activities                                                                                                                  | US\$ 283,966 thousand      | US\$ 283,966 thousand | 243,966                         | 100                        | 16,466,402              | 635,328                                | (Note 2)                                        | Subsidiary |
|                              | J & R Holding Limited                        | Bermuda                | Investment activities                                                                                                                  | US\$ 479,693 thousand      | US\$ 479,693 thousand | 435,128                         | 100                        | 58,740,355              | 2,647,339                              | (Note 2)                                        | Subsidiary |
|                              | ASE Marketing & Service Japan Co., Ltd.      | Japan                  | Engaged in marketing and sales services                                                                                                | JPY 60,000 thousand        | JPY 60,000 thousand   | 1,200                           | 100                        | 35,932                  | 2,520                                  | (Note 2)                                        | Subsidiary |
|                              | Omniquest Industrial Limited                 | British Virgin Islands | Investment activities                                                                                                                  | US\$ 250,504 thousand      | US\$ 250,504 thousand | 250,504,067                     | 71                         | 11,727,839              | (108,751 )                             | (Note 2)                                        | Subsidiary |
|                              | Innosource Limited                           | British Virgin Islands | Investment activities                                                                                                                  | US\$ 86,000 thousand       | US\$ 86,000 thousand  | 86,000,000                      | 100                        | 4,546,594               | (28,038 )                              | (Note 2)                                        | Subsidiary |
|                              | HCK                                          | Taiwan                 | Engaged in the leasing of real estate properties                                                                                       | \$ 390,470                 | \$ 390,470            | 35,497,273                      | 27                         | 295,772                 | (50,747 )                              | (Note 2)                                        | Associate  |
|                              | HC                                           | Taiwan                 | Engaged in the development, construction and leasing of real estate properties                                                         | 2,845,913                  | 2,845,913             | 68,629,782                      | 26                         | 1,100,874               | 418,981                                | (Note 2)                                        | Associate  |
|                              | ASE Test, Inc.                               | Taiwan                 | Engaged in the testing of semiconductors                                                                                               | 20,698,867                 | 20,698,867            | 1,131,452,502                   | 100                        | 29,470,702              | 2,605,255                              | (Note 2)                                        | Subsidiary |
|                              | USI Inc.                                     | Taiwan                 | Investment activities                                                                                                                  | -                          | 20,836,477            | -                               | -                          | -                       | 3,933,906                              | (Note 2)                                        | Subsidiary |
|                              | Luchu Development Corporation                | Taiwan                 | Engaged in the development of real estate properties                                                                                   | 1,366,238                  | 1,366,238             | 131,961,457                     | 67                         | 1,413,008               | 100,195                                | (Note 2)                                        | Subsidiary |
|                              | ASEEE                                        | Taiwan                 | Engaged in the production of embedded substrate                                                                                        | 765,000                    | 765,000               | 76,500,000                      | 51                         | 180,494                 | (600,306 )                             | (Note 2)                                        | Associate  |
|                              | SPIL                                         | Taiwan                 | Engaged in assembly, testing and turnkey services of integrated circuits                                                               | -                          | 48,790,498            | -                               | -                          | -                       | 7,824,233                              | (Note 2)                                        | Associate  |
|                              | Deca Technologies Inc.                       | British Cayman Islands | Holding company and the group engaged in manufacturing, development and marketing of wafer level packaging and interconnect technology | US\$ 59,882 thousand       | US\$ 59,882 thousand  | 98,489,803                      | 22                         | 866,312                 | (883,251 )                             | (Note 2)                                        | Associate  |
|                              | AMPI                                         | Taiwan                 | Engaged in integrated circuit                                                                                                          | \$ 178,861                 | \$ 178,861            | 33,308,452                      | 10                         | 24,115                  | (24,208 )                              | (Note 2)                                        | Associate  |
|                              | ASE Test, Inc.                               | British Virgin Islands | Investment activities                                                                                                                  | US\$ 188,000 thousand      | US\$ 188,000 thousand | 188,000,000                     | 100                        | 4,541,850               | 107,827                                | (Note 2)                                        | Subsidiary |
|                              | Super Zone Holdings Limited                  | Hong Kong              | Investment activities                                                                                                                  | US\$ 100,000 thousand      | US\$ 100,000 thousand | 100,000,000                     | 100                        | 3,077,749               | 104,946                                | (Note 2)                                        | Subsidiary |
| ASE Test, Inc.               | Luchu Development Corporation                | Taiwan                 | Engaged in the development of real estate properties                                                                                   | \$ 372,504                 | \$ 372,504            | 37,250,448                      | 19                         | 398,784                 | 100,195                                | (Note 2)                                        | Subsidiary |
|                              | TLJ Intertech Inc.                           | Taiwan                 | Engaged in information software services                                                                                               | 89,998                     | 89,998                | 2,119,080                       | 60                         | 56,647                  | 6,810                                  | (Note 2)                                        | Subsidiary |
|                              | MF                                           | Taiwan                 | Engaged in information software services                                                                                               | 30,000                     | -                     | 3,000,000                       | 100                        | 29,812                  | (188 )                                 | (Note 2)                                        | Subsidiary |
|                              | AMPI                                         | Taiwan                 | Engaged in integrated circuit                                                                                                          | 225,000                    | 225,000               | 90,000,000                      | 28                         | 160,019                 | (24,208 )                              | (Note 2)                                        | Associate  |
|                              | A.S.E. Holding Limited                       | Singapore              | Investment activities                                                                                                                  | US\$ 84,889 thousand       | US\$ 84,889 thousand  | 11,148,000                      | 10                         | US\$ 124,497 thousand   | US\$ 70,420 thousand                   | (Note 2)                                        | Subsidiary |
|                              | ASE Investment (Labuan) Inc.                 | Malaysia               | Investment activities                                                                                                                  | US\$ 168,643 thousand      | US\$ 168,643 thousand | 168,642,842                     | 70                         | US\$ 385,298 thousand   | US\$ 19,155 thousand                   | (Note 2)                                        | Subsidiary |
| J & R Holding Limited        | ASE Test Limited                             | Singapore              | Investment activities                                                                                                                  | US\$ 964,524 thousand      | US\$ 964,524 thousand | 98,276,087                      | 90                         | US\$ 1,214,334 thousand | US\$ 70,420 thousand                   | (Note 2)                                        | Subsidiary |
|                              | Omniquest Industrial Limited                 | British Virgin Islands | Investment activities                                                                                                                  | US\$ 30,200 thousand       | US\$ 30,200 thousand  | 30,200,000                      | 8                          | US\$ 46,442 thousand    | ( US\$ 3,738 thousand )                | (Note 2)                                        | Subsidiary |
|                              | J&R Industrial Inc.                          | Taiwan                 | Engaged in leasing equipment and investing activity                                                                                    | US\$ 51,344 thousand       | US\$ 51,344 thousand  | 170,000,006                     | 100                        | US\$ 32,814 thousand    | US\$ 125 thousand                      | (Note 2)                                        | Subsidiary |
|                              | ASE Japan Co., Ltd.                          | Japan                  | Engaged in the packaging and testing of semiconductors                                                                                 | US\$ 25,606 thousand       | US\$ 25,606 thousand  | 7,200                           | 100                        | US\$ 77,828 thousand    | ( US\$ 3,103 thousand )                | (Note 2)                                        | Subsidiary |
|                              | ASE (U.S.) Inc.                              | U.S.A                  | After-sales service and sales support                                                                                                  | US\$ 4,600 thousand        | US\$ 4,600 thousand   | 1,000                           | 100                        | US\$ 15,602 thousand    | US\$ 1,695 thousand                    | (Note 2)                                        | Subsidiary |
|                              | Global Advanced Packaging Technology Limited | British Cayman Islands | Investment activities                                                                                                                  | US\$ 190,000 thousand      | US\$ 190,000 thousand | 190,000,000                     | 100                        | US\$ 495,853 thousand   | US\$ 23,387 thousand                   | (Note 2)                                        | Subsidiary |
|                              | Anstock Limited                              | British Cayman Islands | Investment activities                                                                                                                  | US\$ 10 thousand           | US\$ 10 thousand      | 10,000                          | 100                        | US\$ 1,097 thousand     | US\$ 329 thousand                      | (Note 2)                                        | Subsidiary |
|                              | Anstock II Limited                           | British Cayman Islands | Investment activities                                                                                                                  | US\$ 10 thousand           | US\$ 10 thousand      | 10,000                          | 100                        | US\$ 175 thousand       | US\$ - thousand                        | (Note 2)                                        | Subsidiary |
| ASE Investment (Labuan) Inc. | ASE (Korea) Inc.                             | Korea                  | Engaged in the packaging and testing of semiconductors                                                                                 | US\$ 160,000 thousand      | US\$ 160,000 thousand | 20,741,363                      | 100                        | US\$ 550,510 thousand   | US\$ 18,932 thousand                   | (Note 2)                                        | Subsidiary |
| ASE Test Limited             | ASE Holdings (Singapore) Pte Ltd             | Singapore              | Investment activities                                                                                                                  | US\$ 65,520 thousand       | US\$ 65,520 thousand  | 71,428,902                      | 100                        | US\$ 181,454 thousand   | US\$ 20,927 thousand                   | (Note 2)                                        | Subsidiary |
|                              | ASE Test Holdings, Ltd.                      | British Cayman Islands | Investment activities                                                                                                                  | US\$ 222,399 thousand      | US\$ 222,399 thousand | 5                               | 100                        | US\$ 104,027 thousand   | US\$ 1,773 thousand                    | (Note 2)                                        | Subsidiary |
|                              | ASE Investment (Labuan) Inc.                 | Malaysia               | Investment activities                                                                                                                  | US\$ 72,304 thousand       | US\$ 72,304 thousand  | 72,304,040                      | 30                         | US\$ 165,128 thousand   | US\$ 19,155 thousand                   | (Note 2)                                        | Subsidiary |
|                              | ASE Singapore Pte. Ltd.                      | Singapore              | Engaged in the testing of semiconductors                                                                                               | US\$ 55,815 thousand       | US\$ 55,815 thousand  | 30,100,000                      | 100                        | US\$ 158,781 thousand   | US\$ 32,088 thousand                   | (Note 2)                                        | Subsidiary |
| ASE Test Holdings, Ltd.      | ISE Labs, Inc.                               | U.S.A                  | Engaged in the testing of semiconductors                                                                                               | US\$ 221,145 thousand      | US\$ 221,145 thousand | 26,250,000                      | 100                        | US\$ 104,026 thousand   | US\$ 1,773 thousand                    | (Note 2)                                        | Subsidiary |

(Continued)

| Investor Company                                     | Investee Company                                       | Location               | Main Businesses and Products                                                                                                              | Original Investment Amount |                       | Balance as of December 31, 2018 |                         |                         | Net Income (Losses) of the Investee | Share of Profits/Losses of Investee (Note 1) | Note                  |
|------------------------------------------------------|--------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------|---------------------------------|-------------------------|-------------------------|-------------------------------------|----------------------------------------------|-----------------------|
|                                                      |                                                        |                        |                                                                                                                                           | December 31, 2018          | December 31, 2017     | Shares                          | Percentage of Ownership | Carrying Value          |                                     |                                              |                       |
| ASE Holdings (Singapore) Pte Ltd.                    | ASE Electronics (M) Sdn. Bhd.                          | Malaysia               | Engaged in the packaging and testing of semiconductors                                                                                    | US\$ 60,000 thousand       | US\$ 60,000 thousand  | 159,715,000                     | 100                     | US\$ 181,454 thousand   | US\$ 20,927 thousand                | (Note 2)                                     | Subsidiary            |
| Omniquest Industrial Limited                         | ASE Corporation                                        | British Cayman Islands | Investment activities                                                                                                                     | US\$ 352,784 thousand      | US\$ 352,784 thousand | 352,784,067                     | 100                     | US\$ 545,974 thousand   | ( US\$ 3,715 thousand )             | (Note 2)                                     | Subsidiary            |
| ASE Corporation                                      | ASE Mauritius Inc.                                     | Mauritius              | Investment activities                                                                                                                     | US\$ 217,800 thousand      | US\$ 217,800 thousand | 217,800,000                     | 100                     | US\$ 430,193 thousand   | ( US\$ 474 thousand )               | (Note 2)                                     | Subsidiary            |
|                                                      | ASE Labuan Inc.                                        | Malaysia               | Investment activities                                                                                                                     | US\$ 126,184 thousand      | US\$ 126,184 thousand | 126,184,067                     | 100                     | US\$ 115,758 thousand   | ( US\$ 3,224 thousand )             | (Note 2)                                     | Subsidiary            |
| ASE Labuan Inc.                                      | ASE Electronics Inc.                                   | Taiwan                 | Engaged in the production of substrates                                                                                                   | US\$ 125,813 thousand      | US\$ 125,813 thousand | 398,981,900                     | 100                     | US\$ 115,191 thousand   | ( US\$ 3,222 thousand )             | (Note 2)                                     | Subsidiary            |
| Innosource Limited                                   | Omniquest Industrial Limited                           | British Virgin Islands | Investment activities                                                                                                                     | US\$ 74,000 thousand       | US\$ 74,000 thousand  | 74,000,000                      | 21                      | US\$ 113,841 thousand   | ( US\$ 3,738 thousand )             | (Note 2)                                     | Subsidiary            |
| ASE (Shanghai) Inc.                                  | Advanced Semiconductor Engineering (HK) Limited        | Hong Kong              | Engaged in the trading of substrates                                                                                                      | US\$ 1,000 thousand        | US\$ 1,000 thousand   | -                               | 100                     | US\$ 9,000 thousand     | US\$ 141 thousand                   | (Note 2)                                     | Subsidiary            |
| USI Global Inc.                                      | USI Inc.                                               | Taiwan                 | Investment activities                                                                                                                     | \$ 32,912,748              | \$ -                  | 1,757,334,372                   | 100                     | \$ 32,364,100           | \$ 3,933,906                        | (Note 2)                                     | Subsidiary            |
| USI Inc.                                             | Huntington Holdings International Co. Ltd.             | British Virgin Islands | Holding company                                                                                                                           | 8,370,606                  | 8,370,606             | 255,856,840                     | 100                     | 47,967,480              | 4,099,079                           | (Note 2)                                     | Subsidiary            |
| Huntington Holdings International Co. Ltd.           | Unitech Holdings International Co. Ltd.                | British Virgin Islands | Holding company                                                                                                                           | US\$ 3,000 thousand        | US\$ 3,000 thousand   | 3,000,000                       | 100                     | US\$ 8,527 thousand     | ( US\$ 2,119 thousand )             | (Note 2)                                     | Subsidiary            |
|                                                      | Real Tech Holdings Limited                             | British Virgin Islands | Holding company                                                                                                                           | US\$ 149,151 thousand      | US\$ 149,151 thousand | 149,151,000                     | 100                     | US\$ 1,520,983 thousand | US\$ 142,575 thousand               | (Note 2)                                     | Subsidiary            |
|                                                      | Universal ABIT Holding Co., Ltd.                       | British Cayman Islands | Holding company                                                                                                                           | US\$ 28,125 thousand       | US\$ 28,125 thousand  | 90,000,000                      | 100                     | US\$ 13 thousand        | US\$ - thousand                     | (Note 2)                                     | Subsidiary            |
|                                                      | Rising Capital Investment Limited                      | British Virgin Islands | Holding company                                                                                                                           | US\$ 6,000 thousand        | US\$ 6,000 thousand   | 6,000,000                       | 100                     | US\$ 1,149 thousand     | US\$ 4 thousand                     | (Note 2)                                     | Subsidiary            |
|                                                      | Rise Accord Limited                                    | British Virgin Islands | Holding company                                                                                                                           | US\$ 2,000 thousand        | US\$ 2,000 thousand   | 20,000                          | 100                     | US\$ 61 thousand        | ( US\$ 1 thousand )                 | (Note 2)                                     | Subsidiary            |
| Real Tech Holdings Limited                           | USI Enterprise Limited                                 | Hong Kong              | Engaged in the services of investment advisory and warehousing management                                                                 | US\$ 210,900 thousand      | US\$ 210,900 thousand | 210,900,000                     | 95                      | US\$ 1,447,391 thousand | US\$ 141,887 thousand               | (Note 2)                                     | Subsidiary            |
| Universal Scientific Industrial (Shanghai) Co., Ltd. | Universal Global Technology Co., Limited               | Hong Kong              | Holding company                                                                                                                           | CNY 1,149,624 thousand     | CNY 662,390 thousand  | 1,330,965,535                   | 100                     | CNY 3,254,133 thousand  | CNY 270,376 thousand                | (Note 2)                                     | Subsidiary            |
| Universal Global Technology Co., Limited             | Universal Global Industrial Co., Limited               | Hong Kong              | Engaged in manufacturing, trading and investing activity                                                                                  | US\$ 11,000 thousand       | US\$ 11,000 thousand  | 85,800,000                      | 100                     | US\$ 11,953 thousand    | US\$ 800 thousand                   | (Note 2)                                     | Subsidiary            |
|                                                      |                                                        | Hong Kong              | Engaging in ordering and outsourcing, selling electronic products, and providing technical consulting services                            | US\$ 9,000 thousand        | US\$ - thousand       | 9,000,000                       | 100                     | US\$ 8,680 thousand     | ( US\$ 320 thousand )               | (Note 2)                                     | Subsidiary            |
|                                                      | Universal Global Scientific Industrial Co., Ltd.       | Taiwan                 | Engaged in the manufacturing of components of telecomm and cars and provision of related R&D services                                     | US\$ 62,235 thousand       | US\$ 62,235 thousand  | 198,000,000                     | 100                     | US\$ 192,032 thousand   | US\$ 31,532 thousand                | (Note 2)                                     | Subsidiary            |
|                                                      | USI Japan Co., Ltd                                     | Japan                  | Engaged in the manufacturing and sale of computer peripherals, integrated chip and other related accessories                              | US\$ 885 thousand          | US\$ 885 thousand     | 6,400                           | 100                     | US\$ 959 thousand       | US\$ 53 thousand                    | (Note 2)                                     | Subsidiary            |
|                                                      | Universal Scientific Industrial De Mexico S.A. De C.V. | Mexico                 | Engaged in the assembling of motherboards and computer components                                                                         | US\$ 23,963 thousand       | US\$ 23,963 thousand  | 281,085,325                     | 100                     | US\$ 45,781 thousand    | ( US\$ 2,606 thousand )             | (Note 2)                                     | Subsidiary            |
|                                                      | USI America Inc.                                       | U.S.A                  | Engaged in the manufacturing and processing of motherboards and wireless network communication and provision of related technical service | US\$ 9,500 thousand        | US\$ 9,500 thousand   | 250,000                         | 100                     | US\$ 6,346 thousand     | US\$ 170 thousand                   | (Note 2)                                     | Subsidiary            |
|                                                      | Universal Scientific Industrial De Mexico S.A. De C.V. | Mexico                 | Engaged in the assembling of motherboards and computer components                                                                         | US\$ - thousand            | US\$ - thousand       | 1                               | -                       | US\$ - thousand         | ( US\$ 2,606 thousand )             | (Note 2)                                     | Subsidiary            |
| Universal Global Scientific Industrial Co., Ltd.     | Universal Scientific Industrial Co., Ltd.              | Taiwan                 | Engaged in the manufacturing, processing and sale of computers, computer peripherals                                                      | \$ 1,791,208               | \$ 1,791,208          | 139,517,546                     | 99                      | \$ 2,526,080            | \$ 342,038                          | (Note 2)                                     | Subsidiary            |
| SPIL                                                 | SPIL (B.V.I.) Holding Limited                          | British Virgin Islands | Investment activities                                                                                                                     | US\$ 179,400 thousand      | US\$ 179,400 thousand | 179,400,000                     | 100                     | 13,587,935              | (50,678 )                           | (Note 2)                                     | Subsidiary and Note 3 |
|                                                      | Siliconware Investment Co., Ltd.                       | Taiwan                 | Investment activities                                                                                                                     | \$ 2,401,000               | 2,401,000             | 66,769,400                      | 100                     | 2,757,419               | 89,553                              | (Note 2)                                     | Subsidiary and Note 3 |
|                                                      | ChipMOS Technologies Inc.                              | Taiwan                 | Engaged in the packaging and testing of semiconductors                                                                                    | 2,418,928                  | (Note 4)              | 148,910,390                     | 20                      | 4,192,924               | 1,138,821                           | (Note 2)                                     | Associate and Note 3  |
|                                                      | Vertical Circuits, Inc.                                | U.S.A                  | Engaged in the packaging of semiconductors                                                                                                | US\$ 5,000 thousand        | US\$ 5,000 thousand   | 15,710,000                      | 31                      | -                       | -                                   | (Note 2)                                     | Associate and Note 3  |
| Siliconware Investment Co., Ltd.                     | Yann Yuan Investment Co., Ltd.                         | Taiwan                 | Investment activities                                                                                                                     | \$ 2,400,000               | 2,400,000             | 48,000,000                      | 32                      | 2,757,028               | 278,496                             | (Note 2)                                     | Associate and Note 3  |

(Continued)

| Investor Company              | Investee Company              | Location               | Main Businesses and Products                                                                 | Original Investment Amount |                       | Balance as of December 31, 2018 |                            |                | Net Income<br>(Losses) of the Investee | Share of Profits/Losses<br>of Investee (Note 1) | Note                     |
|-------------------------------|-------------------------------|------------------------|----------------------------------------------------------------------------------------------|----------------------------|-----------------------|---------------------------------|----------------------------|----------------|----------------------------------------|-------------------------------------------------|--------------------------|
|                               |                               |                        |                                                                                              | December 31, 2018          | December 31, 2017     | Shares                          | Percentage of<br>Ownership | Carrying Value |                                        |                                                 |                          |
| SPIL (B.V.I.) Holding Limited | Siliconware USA, Inc.         | U.S.A                  | Communications and relationship maintenance with<br>companies headquartered in North America | US\$ 1,250 thousand        | US\$ 1,250 thousand   | 1,250,000                       | 100                        | \$ 238,681     | \$ 21,095                              | (Note 2)                                        | Subsidiary<br>and Note 3 |
|                               | SPIL (Cayman) Holding Limited | British Cayman Islands | Investment activities                                                                        | US\$ 181,200 thousand      | US\$ 181,200 thousand | 181,200,000                     | 100                        | 13,424,211     | (72,057 )                              | (Note 2)                                        |                          |

(Concluded)

Note 1: The share of profits/losses of investee includes the effect of unrealized gross profit on intercompany transaction.

Note 2: The share of profits/losses of investee company is not reflected herein as such amount is already included in the share of profits/losses of the investor company.

Note 3: The Company acquired 100% shareholdings of SPIL in accordance with the joint share exchange agreement on April 30, 2018, and therefore the subsidiaries of SPIL were included in the consolidated financial statements.

Note 4: The Company’s subsidiary, SPIL, acquired ordinary shares of ChipMOS in the second quarter of 2018. As a result, the ownership percentage was increased from 18.23% to 20.47%, and the investment was reclassified from financial assets at fair value through profit or loss to investments accounted for using the equity method.

TABLE 9

ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES

INFORMATION ON INVESTMENT IN MAINLAND CHINA  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(Amounts In Thousands of New Taiwan Dollars, Unless Specified Otherwise)

| Investee Company                                     | Main Business Activities                                                    | Paid-in Capital                                       | Investment Method | Accumulated amount of remittance from Taiwan to Mainland China as of January 1, 2018 | Amount remitted from Taiwan to Mainland China/Amount remitted back to Taiwan for the year ended December 31, 2018 |                         | Accumulated amount of remittance from Taiwan to Mainland China as of December 31, 2018 | Net income of investee for the year ended December 31, 2018 | Ownership held by the Company (direct or indirect) | Investment income (loss) recognised by the Company for the year ended December 31, 2018 | Book value of investments in Mainland China as of December 31, 2018 | Accumulated amount of investment income remitted back to Taiwan as of December 31, 2018 |
|------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
|                                                      |                                                                             |                                                       |                   |                                                                                      | Remitted to Mainland China                                                                                        | Remitted back to Taiwan |                                                                                        |                                                             |                                                    |                                                                                         |                                                                     |                                                                                         |
| ASE (Shanghai) Inc.                                  | Engaged in the production of substrates                                     | \$ 4,349,312<br>( US\$ 148,496 thousand )<br>(Note 8) | Note 1 (1)        | \$ 4,782,216<br>( US\$ 149,800 thousand )<br>(Note 8)                                | \$ -                                                                                                              | \$ -                    | \$ 4,782,216<br>( US\$ 149,800 thousand )                                              | \$ (62,420 )<br>( US\$ -2,157 thousand )<br>(Note 4 )       | 100                                                | \$ (62,420 )<br>( US\$ -2,157 thousand )<br>(Note 4 )                                   | \$ 12,274,087<br>( US\$ 399,612 thousand )                          | None                                                                                    |
| ASE (Kun Shan) Inc.                                  | Engaged in the packaging and testing of semiconductors                      | 8,945,404<br>( US\$ 288,000 thousand )<br>(Note 10 )  | Note 1 (2)        | 8,350,204<br>( US\$ 268,000 thousand )<br>(Note 9 )                                  | -                                                                                                                 | -                       | 8,350,204<br>( US\$ 268,000 thousand )                                                 | 165,347<br>( US\$ 5,478 thousand )<br>(Note 3 )             | 100                                                | 165,347<br>( US\$ 5,478 thousand )<br>(Note 3 )                                         | 6,960,077<br>( US\$ 226,602 thousand )                              | None                                                                                    |
| ASE Assembly & Test (Shanghai) Limited               | Engaged in the packaging and testing of semiconductors                      | 6,501,336<br>( US\$ 203,580 thousand )                | Note 1 (3)        | 5,792,530<br>( US\$ 180,000 thousand )                                               | -                                                                                                                 | -                       | 5,792,530<br>( US\$ 180,000 thousand )                                                 | 717,964<br>( US\$ 23,813 thousand )<br>(Note 3 )            | 100                                                | 717,964<br>( US\$ 23,813 thousand )<br>(Note 3 )                                        | 15,363,304<br>( US\$ 500,189 thousand )                             | None                                                                                    |
| Suzhou ASEN Semiconductors Co., Ltd.                 | Engaged in the packaging and testing of semiconductors                      | 1,568,467<br>( US\$ 48,672 thousand )                 | Note 1 (4)        | 711,180<br>( US\$ 21,600 thousand )                                                  | -                                                                                                                 | -                       | 711,180<br>( US\$ 21,600 thousand )                                                    | 541,706<br>( US\$ 18,036 thousand )<br>(Note 4 )            | 70                                                 | 420,726<br>( US\$ 13,941 thousand )<br>(Note 4, 15 )                                    | 3,956,343<br>( US\$ 128,808 thousand )                              | None                                                                                    |
| ASE WeiHai Inc.                                      | Engaged in the packaging and testing of semiconductors                      | 5,115,481<br>( US\$ 172,200 thousand )                | Note 1 (5)        | 1,295,307<br>( US\$ 40,000 thousand )                                                | -                                                                                                                 | -                       | 1,295,307<br>( US\$ 40,000 thousand )                                                  | 558,064<br>( US\$ 18,530 thousand )<br>(Note 4 )            | 100                                                | 558,064<br>( US\$ 18,530 thousand )<br>(Note 4 )                                        | 3,255,365<br>( US\$ 105,986 thousand )                              | None                                                                                    |
| Shanghai Ding Hui Real Estate Development Co., Ltd.  | Engaged in the development, construction and sale of real estate properties | 16,345,070<br>( CNY 3,600,000 thousand )              | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | (530,605 )<br>( CNY -116,340 thousand )<br>(Note 4 )        | 100                                                | (531,245 )<br>( CNY -116,480 thousand )<br>(Note 4 )                                    | 21,797,205<br>( CNY 4,870,538 thousand )                            | None                                                                                    |
| Shanghai Ding Wei Real Estate Development Co., Ltd.  | Engaged in the development, construction and sale of real estate properties | 8,061,489<br>( CNY 1,798,000 thousand )               | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | (516,772 )<br>( CNY -113,428 thousand )<br>(Note 4 )        | 100                                                | (516,772 )<br>( CNY -113,428 thousand )<br>(Note 4 )                                    | 7,117,823<br>( CNY 1,590,462 thousand )                             | None                                                                                    |
| Shanghai Ding Yu Real Estate Development Co., Ltd.   | Engaged in the development, construction and sale of real estate properties | 4,936,538<br>( CNY 1,100,000 thousand )               | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | (23,773 )<br>( CNY -5,228 thousand )<br>(Note 4 )           | 100                                                | (23,773 )<br>( CNY -5,228 thousand )<br>(Note 4 )                                       | 4,871,595<br>( CNY 1,088,547 thousand )                             | None                                                                                    |
| Kun Shan Ding Hong Real Estate Development Co., Ltd. | Engaged in the development, construction and sale of real estate properties | 3,139,662<br>( CNY 670,000 thousand )                 | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | (5,931 )<br>( CNY -1,305 thousand )<br>(Note 4 )            | 100                                                | (5,931 )<br>( CNY -1,305 thousand )<br>(Note 4 )                                        | 3,096,344<br>( CNY 691,871 thousand )                               | None                                                                                    |
| Advanced Semiconductor Engineering (China) Ltd.      | Engage in the packaging and testing of semiconductors                       | 3,149,000<br>( US\$ 100,000 thousand )                | Note 1 (6)        | 3,149,000<br>( US\$ 100,000 thousand )                                               | -                                                                                                                 | -                       | 3,149,000<br>( US\$ 100,000 thousand )                                                 | 104,946<br>( US\$ 3,462 thousand )<br>(Note 3 )             | 100                                                | 104,946<br>( US\$ 3,462 thousand )<br>(Note 3 )                                         | 3,077,632<br>( US\$ 100,200 thousand )                              | None                                                                                    |
| ASE Investment (Kun Shan) Limited                    | Holding company                                                             | 4,312,518<br>( US\$ 142,000 thousand )<br>(Note 10 )  | Note 1 (7)        | 3,717,318<br>( US\$ 122,000 thousand )<br>(Note 9 )                                  | -                                                                                                                 | -                       | 3,717,318<br>( US\$ 122,000 thousand )                                                 | 81,389<br>( US\$ 2,696 thousand )<br>(Note 3 )              | 100                                                | 81,389<br>( US\$ 2,696 thousand )<br>(Note 3 )                                          | 3,429,470<br>( US\$ 111,655 thousand )                              | None                                                                                    |
| Wuxi Tongzhi Microelectronics Co., Ltd.              | Engage in the packaging and testing of semiconductors                       | 356,682<br>( CNY 73,461 thousand )                    | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | 19,049<br>( CNY 4,192 thousand )<br>(Note 3 )               | 100                                                | 19,049<br>( CNY 4,192 thousand )<br>(Note 3 )                                           | 465,109<br>( CNY 103,928 thousand )                                 | None                                                                                    |

(Continued)

| Investee Company                                           | Main Business Activities                                                                                                                       | Paid-in Capital                                      | Investment Method | Accumulated amount of remittance from Taiwan to Mainland China as of January 1, 2018 | Amount remitted from Taiwan to Mainland China/Amount remitted back to Taiwan for the year ended December 31, 2018 |                         | Accumulated amount of remittance from Taiwan to Mainland China as of December 31, 2018 | Net income of investee for the year ended December 31, 2018 | Ownership held by the Company (direct or indirect) | Investment income (loss) recognised by the Company for the year ended December 31, 2018 | Book value of investments in Mainland China as of December 31, 2018 | Accumulated amount of investment income remitted back to Taiwan as of December 31, 2018 |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
|                                                            |                                                                                                                                                |                                                      |                   |                                                                                      | Remitted to Mainland China                                                                                        | Remitted back to Taiwan |                                                                                        |                                                             |                                                    |                                                                                         |                                                                     |                                                                                         |
| ASE Trading (Shanghai) Ltd.                                | Engaged in trading activity                                                                                                                    | \$ -<br>( CNY - thousand )<br>(Note 14 )             | (Note 2)          | \$ -<br>(Note 2 )                                                                    | \$ -                                                                                                              | \$ -                    | \$ -<br>(Note 2 )                                                                      | \$ (28 )<br>( CNY -6 thousand )<br>(Note 3 )                | 100                                                | \$ (28 )<br>( CNY -6 thousand )<br>(Note 3 )                                            | \$ -<br>( CNY - thousand )                                          | None                                                                                    |
| Shanghai Ding Qi Property Management Co., Ltd.             | Engaged in the management of real estate properties                                                                                            | 5,078<br>( CNY 1,000 thousand )                      | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | 4,821<br>( CNY 1,190 thousand )<br>(Note 4 )                | 100                                                | 4,821<br>( CNY 1,190 thousand )<br>(Note 4 )                                            | (34,596 )<br>( CNY -7,730 thousand )                                | None                                                                                    |
| Shanghai Ding Fan Department Store Co., Ltd.               | Engaged in selling General merchandise                                                                                                         | 7,199<br>( CNY 1,500 thousand )                      | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | (2,044 )<br>( CNY -446 thousand )<br>(Note 4 )              | 100                                                | (2,044 )<br>( CNY -446 thousand )<br>(Note 4 )                                          | 4,741<br>( CNY 1,059 thousand )                                     | None                                                                                    |
| Shanghai Ding Xu Property Management Co., Ltd.             | Engaged in the management of real estate properties                                                                                            | 22,860<br>( CNY 5,000 thousand )                     | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | 1,902<br>( CNY 422 thousand )<br>(Note 4 )                  | 100                                                | 1,902<br>( CNY 422 thousand )<br>(Note 4 )                                              | 24,424<br>( CNY 5,458 thousand )                                    | None                                                                                    |
| ISE labs, China. Ltd.                                      | Engage in the packaging and testing of semiconductors                                                                                          | 222,231<br>( CNY 50,000 thousand )                   | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | (3,803 )<br>( CNY -853 thousand )<br>(Note 3 )              | 100                                                | (3,803 )<br>( CNY -853 thousand )<br>(Note 3 )                                          | 219,950<br>( CNY 49,147 thousand )                                  | None                                                                                    |
| USI Electronics (Shenzhen) Co., Ltd                        | Engaged in the processing and sales of computer and communication peripherals as well as business in import and export of goods and technology | 2,270,625<br>( US\$ 75,000 thousand )                | Note 1 (8)        | 1,180,746                                                                            | -                                                                                                                 | -                       | 1,180,746                                                                              | 2,088,434<br>( CNY 458,875 thousand )<br>(Note 5 )          | 75                                                 | 1,572,024<br>( US\$ 52,274 thousand )<br>(Note 5 )                                      | 9,721,277<br>( US\$ 316,499 thousand )                              | \$ 1,406,326<br>( US\$ 48,243 thousand )                                                |
| Universal Scientific Industrial (Shanghai) Co., Ltd.       | Engaged in the designing, manufacturing and sale of electronic components                                                                      | 10,649,110<br>( CNY 2,175,924 thousand )             | Note 1 (8)        | 1,668,233                                                                            | -                                                                                                                 | -                       | 1,668,233                                                                              | 5,272,248<br>( US\$ 175,318 thousand )<br>(Note 5 )         | 75                                                 | 4,073,721<br>( US\$ 135,463 thousand )<br>(Note 5 )                                     | 31,489,315<br>( US\$ 1,025,210 thousand )                           | 349,290<br>( US\$ 10,955 thousand )                                                     |
| Universal Scientific Industrial (Kunshan) Co., Ltd.        | Engaged in the manufacturing and sale of computer assistance system and related peripherals                                                    | 383,201<br>( US\$ 12,000 thousand )                  | Note 1 (8)        | 383,201                                                                              | -                                                                                                                 | -                       | 383,201                                                                                | 60,361<br>( US\$ 2,007 thousand )<br>(Note 5 )              | 100                                                | 60,361<br>( US\$ 2,007 thousand )<br>(Note 5 )                                          | 369,756<br>( US\$ 12,038 thousand )                                 | None                                                                                    |
| Universal Global Technology (Kunshan) Co., Ltd.            | Engaged in the designing and manufacturing of electronic components                                                                            | 1,202,223<br>( CNY 250,000 thousand )                | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | 984,345<br>( CNY 216,283 thousand )<br>(Note 5 )            | 75                                                 | 759,995<br>( CNY 167,094 thousand )<br>(Note 5 )                                        | 3,283,284<br>( CNY 733,643 thousand )                               | None                                                                                    |
| Universal Global Technology (Shanghai) Co., Ltd.           | Engaged in the processing and sales of computer and communication peripherals as well as business in import and export of goods and technology | 6,652,140<br>( CNY 1,330,000 thousand )              | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | 1,182,088<br>( CNY 259,731 thousand )<br>(Note 5 )          | 75                                                 | 911,860<br>( CNY 200,483 thousand )<br>(Note 5 )                                        | 3,733,066<br>( CNY 834,145 thousand )                               | None                                                                                    |
| Universal Global Electronics (Shanghai) Co., Ltd.          | Engaged in the sale of electronic components and telecommunications equipment                                                                  | 240,850<br>( CNY 50,000 thousand )                   | (Note 2)          | -<br>(Note 2 )                                                                       | -                                                                                                                 | -                       | -<br>(Note 2 )                                                                         | 6,862<br>( CNY 1,508 thousand )<br>(Note 5 )                | 75                                                 | 5,302<br>( CNY 1,166 thousand )<br>(Note 5 )                                            | 190,228<br>( CNY 42,506 thousand )                                  | None                                                                                    |
| Siliconware Technoligy (Suzhou) Limited<br>(Note 13)       | Engage in the packaging and testing of semiconductors                                                                                          | 5,608,532<br>( US\$ 159,577 thousand )<br>(Note 11 ) | Note 1 (9)        | 4,677,513<br>( US\$ 130,000 thousand )                                               | -                                                                                                                 | -                       | 4,677,513<br>( US\$ 130,000 thousand )                                                 | (387,941 )<br>(Note 12 )                                    | 70                                                 | (363,568 )<br>(Note 12 )                                                                | 7,650,597                                                           | None                                                                                    |
| Siliconware Electronics (Fujiam) Co., Limited<br>(Note 13) | Engage in the packaging and testing of semiconductors                                                                                          | 2,741,950<br>( US\$ 90,000 thousand )                | Note 1 (9)        | 1,358,200<br>( US\$ 45,000 thousand )                                                | 1,383,750<br>( US\$ 45,000 thousand )                                                                             | -                       | 2,741,950<br>( US\$ 90,000 thousand )                                                  | (61,828 )<br>(Note 12 )                                     | 100                                                | (33,589 )<br>(Note 12 )                                                                 | 2,642,056                                                           | None                                                                                    |

(Continued)



| Investee Company | Accumulated Investment in Mainland China as of December 31, 2018 | Investment Amounts Authorized by Investment Commission, MOEA | Upper Limit on Investment |
|------------------|------------------------------------------------------------------|--------------------------------------------------------------|---------------------------|
| ASE              | \$ 15,203,097<br>( US\$ 471,400 thousand)                        | \$ 23,178,952<br>(US\$ 730,997 thousand)(Note 8)             | \$ - (Note 6)             |
| ASE Test, Inc.   | 8,878,838<br>( US\$ 288,000 thousand)                            | 8,878,838<br>(US\$ 288,000 thousand)                         | 17,682,422 (Note 7)       |
| USI Inc.         | 3,232,180                                                        | 32,402,340<br>(US\$1,027,236 thousand)                       | - (Note 6)                |
| SPIL             | 6,757,300<br>( US\$ 220,000 thousand)                            | 7,665,758<br>(US\$ 249,577 thousand)(Note 11)                | - (Note 6)                |

Note 1: Investments through a holding company registered in a third region. The holding companies are as follow:

- (1) ASE Mauritius Inc., ASE Corporation, Omniquiest Industrial Limited, Innosource Limited and J&R Holding Limited.
- (2) ASE Mauritius Inc., Alto Enterprises Limited, Innosource Limited, ASE Corporation, Omniquiest Industrial Limited and J&R Holding Limited.
- (3) Global Advanced Packaging Technology Limited and J&R Holding Limited.
- (4) J&R Holding Limited.
- (5) ASE (Korea) Inc., ASE Test Limited, ASE Investment (Labuan) Inc., ASE Holding Ltd. and J&R Holding Limited.
- (6) Super Zone Holdings Limited.
- (7) Alto Enterprises Limited.
- (8) Real Tech Holdings Limited and Huntington Holdings International Co. Ltd..
- (9) SPIL (Cayman) Holding Limited.

Note 2: Invested by companies in mainland China.

Note 3: The basis for investment income (loss) recognition is from the financial statements audited and attested by R.O.C. parent company's CPA.

Note 4: The basis for investment income (loss) recognition is from the financial statements audited and attested by international accounting firm which has cooperative relationship with accounting firm in R.O.C.

Note 5: The basis for investment income (loss) recognition is from the financial statements audited and attested by other CPA in the same accounting firm with R.O.C. parent company's CPA.

Note 6: Pursuant to the Jing-Shen-Zi Letter No. 09704604680 of the Ministry of Economic Affairs, R.O.C amended 'Guidelines Governing the Review of Investment or Technical Cooperation in the Mainland Area' dated on August 29, 2008, as the Company has obtained the certificate of being qualified for operating headquarters, issued by the Industrial Development Bureau, MOEA, the ceiling amount of the investment in Mainland China is not applicable to the Company.

Note 7: The upper limit on investment of ASET, Inc. is calculated as follow:  $\$29,470,703 \times 60\% = 17,682,422$ .

Note 8: There is US\$259,597 thousand difference between MOEA approved investment amount and accumulated outflow of investment from Taiwan. It includes:

- (1) US\$100,000 thousand was directly remitted by the subsidiary, ASE (Korea) Inc.;
- (2) US\$25,000 thousand was by means of Debt for Equity Swap;
- (3) Increasing US\$707 thousand and US\$6,777 thousand of net investment which was recognized by MOEA due to transferring of equity were respectively from transferring ASE (Shanghai) Inc.'s equity from ASE Assembly & Test (Shanghai) Limited and ASE Module (Shanghai) Inc. to ASE Mauritius Inc. and from the absorbing of ASE Module (Shanghai) Inc. by ASE (Shanghai) Inc.;
- (4) US\$127,113 thousand for acquiring 40% shareholdings of ASEN from NXP B.V. by the subsidiary, J&R Holding Limited, was approved by MOEA on May 30, 2018 and remitted in July 2018.

Note 9: It was the same fund that ASET, Inc. indirectly invested to ASE Investment (KS) through another company in 3rd area and then invested to ASEKS.

Note 10: ASE Assembly & Test (Shanghai) Limited newly invested US\$20,000 thousand through ASE Investment (Kun Shan) Limited to ASE (Kun Shan) Inc..

Note 11: There is US\$29,577 thousand difference between MOEA approved investment amount and accumulated outflow of investment from Taiwan. It includes capital increased by earnings.

Note 12: The basis for investment income (loss) recognition is from the financial statements audited and attested by other CPA.

Note 13: The Company acquired 100% shareholdings of SPIL in accordance with the joint share exchange agreement on April 30, 2018, and therefore the subsidiaries of SPIL were included in the consolidated financial statements.

Note 14: ASE Trading (Shanghai) Ltd. has completed deregistration formalities in November 2018.

(Concluded)

**TABLE 10**

**ASE TECHNOLOGY HOLDING CO., LTD. AND SUBSIDIARIES**

**INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT INTERCOMPANY TRANSACTIONS  
FOR THE YEAR ENDED DECEMBER 31, 2018**

**(Amounts In Thousands of New Taiwan Dollars, Unless Specified Otherwise)**

| No. | Company Name                                        | Related Party                                        | Nature of Relationships      | Intercompany Transactions (Note)          |               |                                                                                                       |                                                        |
|-----|-----------------------------------------------------|------------------------------------------------------|------------------------------|-------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
|     |                                                     |                                                      |                              | Financial Statement Account               | Amount (Note) | Terms                                                                                                 | Percentage of Consolidated Net Revenue or Total Assets |
| 0   | The Company                                         | ASE                                                  | Parent company to subsidiary | Other payables                            | \$ 29,900,030 |                                                                                                       | 6                                                      |
|     |                                                     | ASE Test Limited                                     | Parent company to subsidiary | Interest expenses                         | 142,639       |                                                                                                       | -                                                      |
|     |                                                     | ASE Electronics Inc.                                 | Parent company to subsidiary | Other payables                            | 8,000,000     |                                                                                                       | 1                                                      |
|     |                                                     | ASE Electronics Inc.                                 | Parent company to subsidiary | Other payables                            | 700,000       |                                                                                                       | -                                                      |
| 1   | ASE                                                 | ASE Test, Inc.                                       | Subsidiary to subsidiary     | Other payables                            | 2,775,779     |                                                                                                       | 1                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Sales of property, plant and equipment    | 219,032       |                                                                                                       | -                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Purchase of property, plant and equipment | 158,828       |                                                                                                       | -                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Operating costs                           | 105,022       | The transaction has the same terms with other companies                                               | -                                                      |
|     |                                                     | Universal Scientific Industrial Co., Ltd.            | Subsidiary to subsidiary     | Trade receivables                         | 1,019,084     |                                                                                                       | -                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Other current liabilities                 | 129,703       |                                                                                                       | -                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Operating revenues                        | 3,219,194     | The transaction has the same terms with other companies                                               | 1                                                      |
|     |                                                     | ASE (Shanghai) Inc.                                  | Subsidiary to subsidiary     | Trade payables                            | 455,731       |                                                                                                       | -                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Operating costs                           | 1,485,294     | The transaction has the same terms with other companies                                               | -                                                      |
|     |                                                     | ASE (U.S.) Inc.                                      | Subsidiary to subsidiary     | Operating expenses                        | 879,044       | It is calculated by fixed ratio based on actual expenses.<br>There is an upper limit to the expenses. | -                                                      |
|     |                                                     | ASE Electronics Inc.                                 | Subsidiary to subsidiary     | Trade payables                            | 468,572       |                                                                                                       | -                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Operating costs                           | 1,867,454     | The transaction has the same terms with other companies                                               | 1                                                      |
|     |                                                     | J & R Holding Limited                                | Subsidiary to subsidiary     | Other payables                            | 12,193,855    |                                                                                                       | 2                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Interest expenses                         | 186,771       |                                                                                                       | -                                                      |
|     |                                                     | ASE Test Limited                                     | Subsidiary to subsidiary     | Other payables                            | 4,453,675     |                                                                                                       | 1                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Interest expenses                         | 107,855       |                                                                                                       | -                                                      |
|     |                                                     | J&R Industrial Inc.                                  | Subsidiary to subsidiary     | Other payables                            | 400,000       |                                                                                                       | -                                                      |
|     |                                                     | ASE (Korea) Inc.                                     | Subsidiary to subsidiary     | Other payables                            | 3,686,588     |                                                                                                       | 1                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Interest expenses                         | 113,085       |                                                                                                       | -                                                      |
|     |                                                     | Huntington Holdings International Co. Ltd.           | Subsidiary to subsidiary     | Other payables                            | 829,305       |                                                                                                       | -                                                      |
|     |                                                     | USI Enterprise Limited                               | Subsidiary to subsidiary     | Other payables                            | 6,296,575     |                                                                                                       | 1                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Interest expenses                         | 164,130       |                                                                                                       | -                                                      |
|     |                                                     | Real Tech Holdings Limited                           | Subsidiary to subsidiary     | Other payables                            | 1,689,325     |                                                                                                       | -                                                      |
|     |                                                     | A.S.E. Holding Limited                               | Subsidiary to subsidiary     | Other payables                            | 1,842,900     |                                                                                                       | -                                                      |
| 2   | ASE (U.S.) Inc.                                     | ASE (Korea) Inc.                                     | Subsidiary to subsidiary     | Operating revenues                        | 113,248       |                                                                                                       | -                                                      |
|     |                                                     | Huntington Holdings International Co. Ltd.           | Subsidiary to subsidiary     | Operating revenues                        | 121,765       |                                                                                                       | -                                                      |
| 3   | ASE (Shanghai) Inc.                                 | Advanced Semiconductor Engineering (HK) Limited      | Subsidiary to subsidiary     | Trade receivables                         | 398,179       |                                                                                                       | -                                                      |
|     |                                                     |                                                      | Subsidiary to subsidiary     | Operating revenues                        | 1,639,296     | The transaction has the same terms with other companies                                               | -                                                      |
| 4   | Shanghai Ding Hui Real Estate Development Co., Ltd. | Kun Shan Ding Hong Real Estate Development Co., Ltd. | Subsidiary to subsidiary     | Other receivables                         | 225,491       |                                                                                                       | -                                                      |
|     |                                                     | Shanghai Ding Yu Real Estate Development Co., Ltd.   | Subsidiary to subsidiary     | Other receivables                         | 230,320       |                                                                                                       | -                                                      |
|     |                                                     | Shanghai Ding Wei Real Estate Development Co., Ltd.  | Subsidiary to subsidiary     | Other receivables                         | 1,803,095     |                                                                                                       | -                                                      |
| 5   | A.S.E. Holding Limited                              | ASE Test Limited                                     | Subsidiary to subsidiary     | Other payables                            | 1,129,454     |                                                                                                       | -                                                      |

(Continued)



| No. | Company Name                                         | Related Party                                                         | Nature of Relationships  | Intercompany Transactions (Note) |               |                                                          |                                                        |
|-----|------------------------------------------------------|-----------------------------------------------------------------------|--------------------------|----------------------------------|---------------|----------------------------------------------------------|--------------------------------------------------------|
|     |                                                      |                                                                       |                          | Financial Statement Account      | Amount (Note) | Terms                                                    | Percentage of Consolidated Net Revenue or Total Assets |
| 6   | J & R Holding Limited                                | Global Advanced Packaging Technology Limited                          | Subsidiary to subsidiary | Other receivables                | \$ 557,625    |                                                          | -                                                      |
|     |                                                      | Anstock Limited                                                       | Subsidiary to subsidiary | Other receivables                | 290,283       |                                                          | -                                                      |
|     |                                                      | ASE Test Limited                                                      | Subsidiary to subsidiary | Other liabilities                | 8,029,938     |                                                          | 2                                                      |
|     |                                                      | ISE Labs, Inc.                                                        | Subsidiary to subsidiary | Inerest expenses                 | 169,089       |                                                          | -                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Other payables                   | 922,027       |                                                          | -                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Other liabilities                | 553,386       |                                                          | -                                                      |
|     |                                                      | ASE Japan Co., Ltd.                                                   | Subsidiary to subsidiary | Other payables                   | 1,739,437     |                                                          | -                                                      |
|     |                                                      | USI Enterprise Limited                                                | Subsidiary to subsidiary | Other payables                   | 4,779,767     |                                                          | 1                                                      |
|     |                                                      | ASE Singapore Pte.Ltd.                                                | Subsidiary to subsidiary | Other liabilities                | 461,852       |                                                          | -                                                      |
| 7   | ASE WeiHai Inc.                                      | Advanced Semiconductor Engineering (China) Ltd.                       | Subsidiary to subsidiary | Other payables                   | 618,040       | The transacation has the same terms with other companies | -                                                      |
| 8   | ASE Electronics Inc.                                 | ASE Electronics (M) Sdn. Bhd.                                         | Subsidiary to subsidiary | Operating revenues               | 243,905       |                                                          | -                                                      |
|     |                                                      | Universal Scientific Industrial (Shanghai) Co., Ltd.                  | Subsidiary to subsidiary | Operating revenues               | 260,059       |                                                          | -                                                      |
| 9   | ASE Assembly & Test (Shanghai) Limited               | Anstock Limited                                                       | Subsidiary to subsidiary | Other payables                   | 322,523       | The transacation has the same terms with other companies | -                                                      |
|     |                                                      | Advanced Semiconductor Engineering (China) Ltd.                       | Subsidiary to subsidiary | Other payables                   | 416,548       |                                                          | -                                                      |
|     |                                                      | Advanced Semiconductor Engineering (HK) Limited<br>ASE (KunShan) Inc. | Subsidiary to subsidiary | Other liabilities                | 430,010       |                                                          | -                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Operating costs                  | 308,023       |                                                          | -                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Other payables                   | 671,663       |                                                          | -                                                      |
|     |                                                      |                                                                       |                          |                                  |               |                                                          |                                                        |
| 10  | USI Inc.                                             | USI Enterprise Limited                                                | Subsidiary to subsidiary | Other payables                   | 1,842,900     |                                                          | -                                                      |
| 11  | Universal Scientific Industrial (Shanghai) Co., Ltd. | Universal Global Technology (Shanghai) Co., Ltd.                      | Subsidiary to subsidiary | Operating revenues               | 264,102       | The transacation has the same terms with other companies | -                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Other receivables                | 1,797,594     |                                                          | -                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Trade payables                   | 136,253       |                                                          | -                                                      |
|     |                                                      | Universal Global Technology Co., Limited                              | Subsidiary to subsidiary | Trade payables                   | 942,242       | The transacation has the same terms with other companies | -                                                      |
|     |                                                      | Universal Global Industrial Co., Limited                              | Subsidiary to subsidiary | Operating revenues               | 159,007       |                                                          | -                                                      |
|     |                                                      | Universal Global Technology (Kunshan) Co., Ltd.                       | Subsidiary to subsidiary | Trade receivables                | 102,064       |                                                          | -                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Other receivables                | 404,965       |                                                          | -                                                      |
|     |                                                      |                                                                       |                          |                                  |               |                                                          |                                                        |
|     |                                                      |                                                                       |                          |                                  |               |                                                          |                                                        |
| 12  | Universal Global Industrial Co., Limited             | USI Electronics (Shenzhen) Co., Ltd.                                  | Subsidiary to subsidiary | Operating revenues               | 3,761,076     | The transacation has the same terms with other companies | 1                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Trade receivables                | 721,225       |                                                          | -                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Trade payables                   | 3,065,945     |                                                          | 1                                                      |
|     |                                                      | Universal Global Scientific Industrial Co., Ltd.                      | Subsidiary to subsidiary | Operating revenues               | 21,105,755    | The transacation has the same terms with other companies | 6                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Trade receivables                | 5,530,892     |                                                          | 1                                                      |
|     |                                                      | Universal Global Technology (Kunshan) Co., Ltd.                       | Subsidiary to subsidiary | Trade payables                   | 2,797,715     |                                                          | 1                                                      |
|     |                                                      |                                                                       |                          |                                  |               |                                                          |                                                        |
| 13  | Universal Global Technology Co., Limited             | Universal Global Technology (Kunshan) Co., Ltd.                       | Subsidiary to subsidiary | Operating revenues               | 3,495,976     | The transacation has the same terms with other companies | 1                                                      |
|     |                                                      |                                                                       | Subsidiary to subsidiary | Trade receivables                | 1,195,551     |                                                          | -                                                      |
|     |                                                      | USI Electronics (Shenzhen) Co., Ltd.                                  | Subsidiary to subsidiary | Other payables                   | 1,228,600     | The transacation has the same terms with other companies | -                                                      |
|     |                                                      | Universal Global Technology (Shanghai) Co., Ltd.                      | Subsidiary to subsidiary | Operating revenues               | 165,751       |                                                          | -                                                      |
|     |                                                      | USI America Inc.                                                      | Subsidiary to subsidiary | Operating expenses               | 135,634       |                                                          | -                                                      |
|     |                                                      | Universal Scientific Industrial (Shanghai) Co., Ltd.                  | Subsidiary to subsidiary | Operating revenues               | 3,382,320     | The transacation has the same terms with other companies | 1                                                      |
|     |                                                      | Universal Scientific Industrial De Mexico S.A. De C.V.                | Subsidiary to subsidiary | Trade receivables                | 767,875       |                                                          | -                                                      |
|     |                                                      |                                                                       |                          |                                  |               |                                                          |                                                        |
| 14  | Universal Global Scientific Industrial Co., Ltd.     | USI Electronics (Shenzhen) Co., Ltd.                                  | Subsidiary to subsidiary | Operating revenues               | 192,545       | The transacation has the same terms with other companies | -                                                      |
|     |                                                      | Universal Scientific Industrial (Shanghai) Co., Ltd.                  | Subsidiary to subsidiary | Operating revenues               | 238,882       |                                                          | -                                                      |
|     |                                                      | Universal Global Industrial Co., Limited                              | Subsidiary to subsidiary | Operating revenues               | 144,064       | The transacation has the same terms with other companies | -                                                      |
|     |                                                      | Universal Scientific Industrial Co., Ltd.                             | Subsidiary to subsidiary | Operating revenues               | 426,565       |                                                          | -                                                      |
|     |                                                      | Universal Scientific Industrial De Mexico S.A. De C.V.                | Subsidiary to subsidiary | Trade receivables                | 174,176       |                                                          | -                                                      |
|     |                                                      |                                                                       |                          | Other receivables                | 1,015,053     |                                                          | -                                                      |

(Continued)

| No. | Company Name                                     | Related Party                                          | Nature of Relationships  | Intercompany Transactions (Note)       |               |                                                          |                                                        |
|-----|--------------------------------------------------|--------------------------------------------------------|--------------------------|----------------------------------------|---------------|----------------------------------------------------------|--------------------------------------------------------|
|     |                                                  |                                                        |                          | Financial Statement Account            | Amount (Note) | Terms                                                    | Percentage of Consolidated Net Revenue or Total Assets |
| 15  | USI Electronics (Shenzhen) Co., Ltd.             | Universal Global Industrial Co., Limited               | Subsidiary to subsidiary | Operating revenues                     | \$ 13,263,087 | The transacation has the same terms with other companies | 4                                                      |
|     |                                                  | Universal Global Technology (Shanghai) Co., Ltd.       | Subsidiary to subsidiary | Other receivables                      | 2,162,928     |                                                          | -                                                      |
|     |                                                  | Universal Scientific Industrial De Mexico S.A. De C.V. | Subsidiary to subsidiary | Operating revenues                     | 251,918       |                                                          | -                                                      |
|     |                                                  |                                                        |                          | Trade receivables                      | 144,582       |                                                          | -                                                      |
| 16  | Universal Global Technology (Kunshan) Co., Ltd.  | Universal Global Industrial Co., Limited               | Subsidiary to subsidiary | Operating revenues                     | 10,770,848    | The transacation has the same terms with other companies | 3                                                      |
| 17  | Universal Global Technology (Shanghai) Co., Ltd. | USI Electronics (Shenzhen) Co., Ltd.                   | Subsidiary to subsidiary | Operating revenues                     | 134,350       | The transacation has the same terms with other companies | -                                                      |
|     |                                                  | Universal Scientific Industrial (Shanghai) Co., Ltd.   | Subsidiary to subsidiary | Operating revenues                     | 482,598       | The transacation has the same terms with other companies | -                                                      |
| 18  | Universal Scientific Industrial Co., Ltd.        | Universal Scientific Industrial De Mexico S.A. De C.V. | Subsidiary to subsidiary | Other receivables                      | 430,010       |                                                          | -                                                      |
| 19  | SPIL                                             | Siliconware Technology (Suzhou) Limited                | Subsidiary to subsidiary | Sales of property, plant and equipment | 138,275       |                                                          | -                                                      |
|     |                                                  | Siliconware USA, Inc.                                  | Subsidiary to subsidiary | Operating expenses                     | 317,939       | Based on contractual term                                | -                                                      |

Note: Amount was eliminated based on the audited financial statements.

(Concluded)

**ASE Technology Holding Co., Ltd.**

**Parent Company Only Financial Statements for the  
Years Ended December 31, 2018 and 2017 and  
Independent Auditors' Report**

## INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders  
ASE Technology Holding Co., Ltd.

### Opinion

We have audited the accompanying parent company only financial statements of ASE Technology Holding Co., Ltd. (the "Company"), which comprise the balance sheets as of December 31, 2018 and 2017, and the statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the parent company only financial statements, including a summary of significant accounting policies (collectively referred to as the "parent company only financial statements").

In our opinion, based on our audits and the report of other auditors (please refer to the Other Matter paragraph), the accompanying parent company only financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and its financial performance and its cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

### Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Parent Company Only Financial Statements section of our report. We are independent of the Company in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the parent company only financial statements for the year ended December 31, 2018. These matters were addressed in the context of our audit of the parent company only financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

The key audit matter of the Company's parent company only financial statements for the year ended December 31, 2018 is discussed as follows.

#### The Identification and Valuation of Intangible Assets from Acquisition of Subsidiaries

The Company completed the acquisition of Siliconware Precision Industries Co., Ltd. ("SPIL") in April 2018 at the consideration of NT\$168,440,585 thousand. Goodwill of NT\$39,334,426 thousand and the other intangible assets of NT\$29,338,821 thousand arose from the acquisition were included in the Company's investments accounted for using the equity method and constituted 23% of total assets of the Company as of December 31, 2018, which was significant to the accompanying parent company only financial statements taken as a whole. Management has completed the identification of the difference between the cost of the investment and the Company's share of the net fair value of SPIL's identifiable assets and liabilities.



While identifying the difference between the cost of the investment and the Company's share of the net fair value of SPIL's identifiable assets and liabilities, management estimated the fair value of the intangible assets using the related estimated cash flow projections or relief from expenses. Certain assumptions were of high uncertainty since they required management to make significant estimates and judgment related to semiconductor industry varied by economic trends. In addition, it also has impact on the amortization recognized based on the estimated economic beneficial lives and the impairment assessment of the Company's investments accounted for using the equity method in the future. Therefore, we determined that identification and valuation of intangible assets from the acquisition of SPIL as a key audit matter.

Please refer to Notes 4(d), 5 and 6 to the accompanying parent company only financial statements for related accounting policies and the uncertainty around the accounting estimates and assumptions regarding the investment in SPIL.

In addition to the understanding of the management's process of identification and valuation of intangible assets from the acquisition of SPIL's shareholdings, our key audit procedures included the followings:

1. We inquired and evaluated the professional competency and objectivity of the external appraisers engaged by the management in the process of identification and valuation of intangible assets.
2. We assessed the reasonableness of the management's assumptions in the process of identification and valuation of intangible assets. We also engaged our valuation specialists in evaluating the reasonableness of the valuation report issued by the external appraisers, including the valuation model used, the factors applied, the categories of intangible assets identified and the related economic benefit lives estimated in the valuation report. Our valuation specialists also tested the mathematical accuracy of the calculation in the valuation report.
3. We tested the accuracy of the amortization expenses recognized for those identified intangible assets and evaluated the completeness and reasonableness of the disclosures regarding the acquisition of subsidiaries in the parent company only financial statements.

### **Emphasis of Matter**

As discussed in Note 1 to the parent company only financial statements, the share exchange was conducted on April 30, 2018 (date of incorporation) in accordance with the joint share exchange agreement at an exchange ratio of 1 ordinary share of Advanced Semiconductor Engineering, Inc. (ASE) for 0.5 ordinary share of the Company, and then the Company owned 100% shareholdings of ASE. The aforementioned share exchange was an organization restructure under common control that the Company was essentially the continuation of ASE. The related assets and liabilities in the Company's parent company only financial statements before the date of incorporation were recognized based on the carrying amounts of those in ASE's parent company only financial statements. The parent company only financial statements of the Company for prior periods are prepared under the assumption that the Company owned 100% shareholdings of ASE at the very beginning and accounted for ASE as a subsidiary using the equity method.

In addition, as discussed in Note 1 to the parent company only financial statements that ASE spun off its investment department which was responsible for managing the ordinary shares and assets of USI Inc. (USIINC) as well as relevant assets (including assets, liabilities and business) into a newly established company, USI Global Inc. (USI Global), USI Global then issued new ordinary shares to the Company as the consideration. The aforementioned transaction was also an organization restructure under common control. The parent company only financial statements of the Company for prior periods are prepared under the assumption that the spin-off has been completed at the very beginning and the Company accounted for USI Global as a subsidiary using the equity method.

## **Other Matter**

We did not audit the financial statements of SPIL, the Company's investment in which was accounted for (1) as a subsidiary accounted for using the equity method as of December 31, 2018 and for the period from April 30, 2018 through December 31, 2018 and (2) as an investment accounted for using the equity method of the Company's subsidiary as of December 31, 2017 and for the year then ended, and the period from January 1, 2018 through April 29, 2018, but such financial statements were audited by other auditors. Our opinion, insofar as it relates to the amounts included for SPIL, is based solely on the report of other auditors. The carrying amount of the investment in SPIL accounted for using the equity method constituted 54% and 24%, respectively, of the Company's total assets as of December 31, 2018 and 2017, and the share of profit of SPIL constituted 30% and 4%, respectively, of the Company's net profit for the years then ended.

## **Responsibilities of Management and Those Charged with Governance for the Parent Company Only Financial Statements**

Management is responsible for the preparation and fair presentation of the parent company only financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and for such internal control as management determines is necessary to enable the preparation of the parent company only financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the parent company only financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the audit committee, are responsible for overseeing the Company's financial reporting process.

## **Auditors' Responsibilities for the Audit of the Parent Company Only Financial Statements**

Our objectives are to obtain reasonable assurance about whether the parent company only financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these parent company only financial statements.

As part of an audit in accordance with the auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the parent company only financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material



uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the parent company only financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the parent company only financial statements, including the disclosures, and whether the parent company only financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
6. Obtain sufficient and appropriate audit evidence regarding the financial information of entities or business activities within the Company to express an opinion on the parent company only financial statements. We are responsible for the direction, supervision, and performance of the audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the parent company only financial statements for the year ended December 31, 2018 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Jia-Ling Chiang and Cheng-Hung Kuo.

Deloitte & Touche  
Taipei, Taiwan  
Republic of China

February 26, 2019

#### Notice to Readers

*The accompanying parent company only financial statements are intended only to present the financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to audit such financial statements are those generally applied in the Republic of China.*

*For the convenience of readers, the independent auditors' report and the accompanying parent company only financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and parent company only financial statements shall prevail.*

# ASE TECHNOLOGY HOLDING CO., LTD.

## PARENT COMPANY ONLY BALANCE SHEETS AS OF DECEMBER 31, 2018 AND 2017 (In Thousands of New Taiwan Dollars)

|                                                               | December 31, 2018     |            | December 31, 2017<br>(Note 4(b)) |            |
|---------------------------------------------------------------|-----------------------|------------|----------------------------------|------------|
|                                                               | NT\$                  | %          | NT\$                             | %          |
| <b>ASSETS</b>                                                 |                       |            |                                  |            |
| <b>CURRENT ASSETS</b>                                         |                       |            |                                  |            |
| Cash                                                          | \$ 78,075             | -          | \$ -                             | -          |
| Other receivables                                             | 6,672                 | -          | -                                | -          |
| Other current assets                                          | 14,445                | -          | -                                | -          |
| Total current assets                                          | 99,192                | -          | -                                | -          |
| <b>NON-CURRENT ASSETS</b>                                     |                       |            |                                  |            |
| Investments accounted for using the equity method<br>(Note 6) | 296,976,191           | 100        | 190,801,543                      | 100        |
| Total non-current assets                                      | 296,976,191           | 100        | 190,801,543                      | 100        |
| <b>TOTAL</b>                                                  | <u>\$ 297,075,383</u> | <u>100</u> | <u>\$ 190,801,543</u>            | <u>100</u> |
| <b>LIABILITIES AND EQUITY</b>                                 |                       |            |                                  |            |
| <b>CURRENT LIABILITIES</b>                                    |                       |            |                                  |            |
| Other payables                                                | \$ 176,655            | -          | \$ -                             | -          |
| Other payables to related parties (Note 16)                   | 38,600,030            | 13         | -                                | -          |
| Current portion of long-term borrowings (Note 7)              | 5,371,917             | 2          | -                                | -          |
| Other current liabilities                                     | 3,427                 | -          | -                                | -          |
| Total current liabilities                                     | 44,152,029            | 15         | -                                | -          |
| <b>NON-CURRENT LIABILITIES</b>                                |                       |            |                                  |            |
| Long-term borrowings (Note 7)                                 | 49,900,000            | 17         | -                                | -          |
| Total non-current liabilities                                 | 49,900,000            | 17         | -                                | -          |
| Total liabilities                                             | 94,052,029            | 32         | -                                | -          |
| <b>EQUITY (Note 8)</b>                                        |                       |            |                                  |            |
| Share capital                                                 |                       |            |                                  |            |
| Ordinary shares                                               | 43,201,486            | 15         | 87,246,194                       | 46         |
| Shares subscribed in advance                                  | 15,658                | -          | 134,593                          | -          |
| Total share capital                                           | 43,217,144            | 15         | 87,380,787                       | 46         |
| Capital surplus                                               | 143,275,213           | 48         | 40,622,877                       | 21         |
| Retained earnings                                             |                       |            |                                  |            |
| Legal reserve                                                 | -                     | -          | 16,765,066                       | 9          |
| Special reserve                                               | 3,353,938             | 1          | 3,353,938                        | 2          |
| Unappropriated earnings                                       | 22,038,948            | 7          | 56,287,526                       | 29         |
| Total retained earnings                                       | 25,392,886            | 8          | 76,406,530                       | 40         |
| Other equity                                                  | (6,902,782)           | (2)        | (6,316,138)                      | (3)        |
| Treasury shares                                               | (1,959,107)           | (1)        | (7,292,513)                      | (4)        |
| Total equity                                                  | 203,023,354           | 68         | 190,801,543                      | 100        |
| <b>TOTAL</b>                                                  | <u>\$ 297,075,383</u> | <u>100</u> | <u>\$ 190,801,543</u>            | <u>100</u> |

The accompanying notes are an integral part of the parent company only financial statements.

(With Deloitte & Touche auditors' report dated February 26, 2019)



# ASE TECHNOLOGY HOLDING CO., LTD.

## PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017 (In Thousands of New Taiwan Dollars Except Earnings Per Share)

|                                                                                                                                                                                                                | For the Year Ended December 31 |      |                     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------|---------------------|-------|
|                                                                                                                                                                                                                | 2018                           |      | 2017                |       |
|                                                                                                                                                                                                                | NT\$                           | %    | (Note 4(b))<br>NT\$ | %     |
| OPERATING REVENUES                                                                                                                                                                                             | \$ 19,026,512                  | 100  | \$ 22,987,819       | 100   |
| GROSS PROFIT                                                                                                                                                                                                   | 19,026,512                     | 100  | 22,987,819          | 100   |
| OPERATING EXPENSES (Note 9)                                                                                                                                                                                    |                                |      |                     |       |
| General and administrative expenses                                                                                                                                                                            | 205,468                        | 1    | -                   | -     |
| Total operating expenses                                                                                                                                                                                       | 205,468                        | 1    | -                   | -     |
| PROFIT FROM OPERATIONS                                                                                                                                                                                         | 18,821,044                     | 99   | 22,987,819          | 100   |
| NON-OPERATING INCOME AND EXPENSES                                                                                                                                                                              |                                |      |                     |       |
| Other income                                                                                                                                                                                                   | 435                            | -    | -                   | -     |
| Other gains, net (Note 9)                                                                                                                                                                                      | 7,571,880                      | 40   | -                   | -     |
| Finance costs (Note 9)                                                                                                                                                                                         | (1,131,003 )                   | (6 ) | -                   | -     |
| Total non-operating income and expenses                                                                                                                                                                        | 6,441,312                      | 34   | -                   | -     |
| PROFIT BEFORE INCOME TAX                                                                                                                                                                                       | 25,262,356                     | 133  | 22,987,819          | 100   |
| INCOME TAX EXPENSE (Note 10)                                                                                                                                                                                   | -                              | -    | -                   | -     |
| NET PROFIT FOR THE YEAR                                                                                                                                                                                        | 25,262,356                     | 133  | 22,987,819          | 100   |
| OTHER COMPREHENSIVE INCOME (LOSS)                                                                                                                                                                              |                                |      |                     |       |
| Items that will not be reclassified subsequently to profit or loss                                                                                                                                             |                                |      |                     |       |
| Share of other comprehensive income (loss) of subsidiaries                                                                                                                                                     | (1,163,054 )                   | (6 ) | 175,100             | -     |
| Items that may be reclassified subsequently to profit or loss                                                                                                                                                  |                                |      |                     |       |
| Share of other comprehensive income (loss) of subsidiaries                                                                                                                                                     | 562,794                        | 3    | (4,432,564 )        | (19 ) |
| Other comprehensive loss for the year, net of income tax                                                                                                                                                       | (600,260 )                     | (3 ) | (4,257,464 )        | (19 ) |
| TOTAL COMPREHENSIVE INCOME FOR THE YEAR                                                                                                                                                                        | \$ 24,662,096                  | 130  | \$ 18,730,355       | 81    |
| EARNINGS PER SHARE (4,080,443 thousand shares and 4,184,620 thousand shares were used in the computation of basic and diluted earnings per share, respectively, for the year ended December 31, 2017, Note 11) |                                |      |                     |       |
| Basic                                                                                                                                                                                                          | \$ 5.95                        |      | \$ 5.63             |       |
| Diluted                                                                                                                                                                                                        | \$ 5.84                        |      | \$ 5.23             |       |

The accompanying notes are an integral part of the parent company only financial statements.

(With Deloitte & Touche auditors' report dated February 26, 2019)

ASE TECHNOLOGY HOLDING CO., LTD.

PARENT COMPANY ONLY STATEMENTS OF CHANGES IN EQUITY  
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017  
(In Thousands of New Taiwan Dollars)

|                                                                                                               | Other Equity             |               |                    |                   |                    |                            |               |                                                                    |                                                                         |                                                                                                         |                 |                    |                 |
|---------------------------------------------------------------------------------------------------------------|--------------------------|---------------|--------------------|-------------------|--------------------|----------------------------|---------------|--------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------|--------------------|-----------------|
|                                                                                                               | Share Capital            |               | Capital<br>Surplus | Retained Earnings |                    |                            |               | Exchange<br>Differences on<br>Translating<br>Foreign<br>Operations | Unrealized Gain<br>(Loss) on<br>Available- for-sale<br>Financial Assets | Unrealized Gain (Loss)<br>on Financial Assets at<br>Fair Value Through<br>Other Comprehensive<br>Income |                 | Treasury<br>Shares | Total<br>Equity |
|                                                                                                               | Shares<br>(In Thousands) | Amounts       |                    | Legal<br>Reserve  | Special<br>Reserve | Unappropriated<br>Earnings | Total         |                                                                    |                                                                         | Total                                                                                                   |                 |                    |                 |
| BALANCE AT JANUARY 1, 2017                                                                                    | 7,946,184                | \$ 79,568,040 | \$ 22,265,049      | \$ 14,597,032     | \$ 3,353,938       | \$ 46,710,051              | \$ 64,661,021 | \$ (1,642,724 )                                                    | \$ (240,850 )                                                           | \$ -                                                                                                    | \$ (1,883,574 ) | \$ (7,292,513 )    | \$ 157,318,023  |
| Change from investments in associates and joint ventures<br>accounted for using the equity method             | -                        | -             | 1,490              | -                 | -                  | (2,212 )                   | (2,212 )      | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | (722 )          |
| Net profit for the year ended December 31, 2017                                                               | -                        | -             | -                  | -                 | -                  | 22,987,819                 | 22,987,819    | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 22,987,819      |
| Other comprehensive income (loss) for the year ended<br>December 31, 2017, net of income tax                  | -                        | -             | -                  | -                 | -                  | 175,100                    | 175,100       | (5,090,036 )                                                       | 657,472                                                                 | -                                                                                                       | (4,432,564 )    | -                  | (4,257,464 )    |
| Total comprehensive income (loss) for the year ended<br>December 31, 2017, net of income tax                  | -                        | -             | -                  | -                 | -                  | 23,162,919                 | 23,162,919    | (5,090,036 )                                                       | 657,472                                                                 | -                                                                                                       | (4,432,564 )    | -                  | 18,730,355      |
| Appropriation of 2016 earnings                                                                                |                          |               |                    |                   |                    |                            |               |                                                                    |                                                                         |                                                                                                         |                 |                    |                 |
| Legal reserve                                                                                                 | -                        | -             | -                  | 2,168,034         | -                  | (2,168,034 )               | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | -               |
| Cash dividends declared by the Company                                                                        | -                        | -             | -                  | -                 | -                  | (11,415,198 )              | (11,415,198 ) | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | (11,415,198 )   |
|                                                                                                               | -                        | -             | -                  | 2,168,034         | -                  | (13,583,232 )              | (11,415,198 ) | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | (11,415,198 )   |
| Issue of ordinary shares for capital increase by cash (Note 8)                                                | 300,000                  | 3,000,000     | 7,290,000          | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 10,290,000      |
| Issue of ordinary shares under conversion of bonds (Notes 8)                                                  | 424,258                  | 4,242,577     | 9,657,905          | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 13,900,482      |
| Issue of dividends received by subsidiaries from the Company                                                  | -                        | -             | 200,977            | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 200,977         |
| Changes in percentage of ownership interest in subsidiaries                                                   | -                        | -             | 3,055              | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 3,055           |
| Issue of ordinary shares under employee share options                                                         | 67,637                   | 570,170       | 1,256,789          | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 1,826,959       |
| Additional non-controlling interest arising on issue of employee<br>share options by subsidiaries             | -                        | -             | (52,388 )          | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | (52,388 )       |
| BALANCE AT December 31, 2017                                                                                  | 8,738,079                | \$ 87,380,787 | \$ 40,622,877      | \$ 16,765,066     | \$ 3,353,938       | \$ 56,287,526              | \$ 76,406,530 | \$ (6,732,760 )                                                    | \$ 416,622                                                              | \$ -                                                                                                    | \$ (6,316,138 ) | \$ (7,292,513 )    | \$ 190,801,543  |
| BALANCE AT JANUARY 1, 2018                                                                                    | 8,738,079                | \$ 87,380,787 | \$ 40,622,877      | \$ 16,765,066     | \$ 3,353,938       | \$ 56,287,526              | \$ 76,406,530 | \$ (6,732,760 )                                                    | \$ 416,622                                                              | \$ -                                                                                                    | \$ (6,316,138 ) | \$ (7,292,513 )    | \$ 190,801,543  |
| Effect of retrospective applications (Note 3)                                                                 | -                        | -             | -                  | -                 | -                  | 880,368                    | 880,368       | -                                                                  | (416,622 )                                                              | 135,517                                                                                                 | (281,105 )      | -                  | 599,263         |
| ADJUSTED BALANCE AT JANUARY 1, 2018                                                                           | 8,738,079                | 87,380,787    | 40,622,877         | 16,765,066        | 3,353,938          | 57,167,894                 | 77,286,898    | (6,732,760 )                                                       | -                                                                       | 135,517                                                                                                 | (6,597,243 )    | (7,292,513 )       | 191,400,806     |
| Change from investments in associates and joint<br>ventures accounted for using the equity method             | -                        | -             | 1,411,899          | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 1,411,899       |
| Cash dividends paid from the capital surplus (Note 8)                                                         | -                        | -             | (10,795,980 )      | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | (10,795,980 )   |
| Other changes in the capital surplus                                                                          | -                        | -             | 872                | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 872             |
| Net profit for the year ended December 31, 2018                                                               | -                        | -             | -                  | -                 | -                  | 25,262,356                 | 25,262,356    | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 25,262,356      |
| Other comprehensive income (loss) for the year ended<br>December 31, 2018, net of income tax                  | -                        | -             | -                  | -                 | -                  | (146,194 )                 | (146,194 )    | 562,794                                                            | -                                                                       | (1,016,860 )                                                                                            | (454,066 )      | -                  | (600,260 )      |
| Total comprehensive income (loss) for the year ended<br>December 31, 2018, net of income tax                  | -                        | -             | -                  | -                 | -                  | 25,116,162                 | 25,116,162    | 562,794                                                            | -                                                                       | (1,016,860 )                                                                                            | (454,066 )      | -                  | 24,662,096      |
| Effect of the joint share exchange (Note 4)                                                                   | (4,318,392 )             | (43,183,919 ) | 117,693,658        | (16,765,066 )     | -                  | (57,744,673 )              | (74,509,739 ) | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | -               |
| Buy-back of ordinary shares                                                                                   | -                        | -             | -                  | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | (71,302 )          | (71,302 )       |
| Cancellation of treasury shares                                                                               | (121,852 )               | (1,218,520 )  | (1,480,903 )       | -                 | -                  | (2,705,285 )               | (2,705,285 )  | -                                                                  | -                                                                       | -                                                                                                       | -               | 5,404,708          | -               |
| Issue of dividends received by subsidiaries from the Company                                                  | -                        | -             | 182,354            | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 182,354         |
| Disposal of interest in associates and joint ventures accounted<br>for using the equity method                | -                        | -             | (1,408,495 )       | -                 | -                  | 204,450                    | 204,450       | 282,291                                                            | -                                                                       | (133,364 )                                                                                              | 148,927         | -                  | (1,055,118 )    |
| Differences between consideration and carrying amount arising<br>from acquisition or disposal of subsidiaries | -                        | -             | (1,142,856 )       | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | (1,142,856 )    |
| Changes in percentage of ownership interest in subsidiaries                                                   | -                        | -             | (1,118,102 )       | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | (1,118,102 )    |
| Issue of ordinary shares under employee share options (Note 12)                                               | 23,879                   | 238,796       | 549,345            | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | 788,141         |
| Additional non-controlling interest arising on issue of employee<br>share options by subsidiaries             | -                        | -             | (1,239,456 )       | -                 | -                  | -                          | -             | -                                                                  | -                                                                       | -                                                                                                       | -               | -                  | (1,239,456 )    |
| Fair value through other comprehensive income - equity<br>instruments                                         | -                        | -             | -                  | -                 | -                  | 400                        | 400           | -                                                                  | -                                                                       | (400 )                                                                                                  | (400 )          | -                  | -               |
| BALANCE AT December 31, 2018                                                                                  | 4,321,714                | \$ 43,217,144 | \$ 143,275,213     | \$ -              | \$ 3,353,938       | \$ 22,038,948              | \$ 25,392,886 | \$ (5,887,675 )                                                    | \$ -                                                                    | \$ (1,015,107 )                                                                                         | \$ (6,902,782 ) | \$ (1,959,107 )    | \$ 203,023,354  |

The accompanying notes are an integral part of the parent company only financial statements.  
(With Deloitte & Touche auditors’ report dated February 26, 2019)

# ASE TECHNOLOGY HOLDING CO., LTD.

## PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017 (In Thousands of New Taiwan Dollars)

|                                                                     | For the Year Ended December 31 |               |
|---------------------------------------------------------------------|--------------------------------|---------------|
|                                                                     | 2018                           | 2017          |
|                                                                     | (Note 4(b))                    |               |
|                                                                     | NT\$                           | NT\$          |
| CASH FLOWS FROM OPERATING ACTIVITIES                                |                                |               |
| Profit before income tax                                            | \$ 25,262,356                  | \$ 22,987,819 |
| Adjustments for:                                                    |                                |               |
| Finance costs                                                       | 1,131,003                      | -             |
| Interest income                                                     | (435 )                         | -             |
| Compensation cost of employee share options                         | 2,414                          | -             |
| Share of profit of subsidiaries                                     | (19,026,512 )                  | (22,987,819 ) |
| Remeasure gain on investments accounted for using the equity method | (7,571,882 )                   | -             |
| Changes in operating assets and liabilities                         |                                |               |
| Other receivables                                                   | (6,672 )                       | -             |
| Other current assets                                                | (14,445 )                      | -             |
| Other payables                                                      | 100,795                        | -             |
| Other payables to related parties                                   | 30                             | -             |
| Other current liabilities                                           | 3,427                          | -             |
| Cash used in operations                                             | (119,921 )                     | -             |
| Interest received                                                   | 435                            | -             |
| Dividend received                                                   | 38,579,558                     | -             |
| Interest paid                                                       | (868,226 )                     | -             |
| Net cash generated from operating activities                        | 37,591,846                     | -             |
| CASH FLOWS FROM INVESTING ACTIVITIES                                |                                |               |
| Acquisition of subsidiaries                                         | (120,547,783 )                 | -             |
| Net cash used in investing activities                               | (120,547,783 )                 | -             |
| CASH FLOWS FROM FINANCING ACTIVITIES                                |                                |               |
| Proceeds from long-term borrowings                                  | 90,085,000                     | -             |
| Repayment of long-term borrowings                                   | (35,000,000 )                  | -             |
| Increase in other payable to related parties                        | 38,600,000                     | -             |
| Dividends paid                                                      | (10,795,980 )                  | -             |
| Proceeds from exercise of employee share options                    | 144,992                        | -             |
| Net cash generated from financing activities                        | 83,034,012                     | -             |
| NET INCREASE IN CASH                                                | 78,075                         | -             |
| CASH AT THE BEGINNING OF THE YEAR                                   | -                              | -             |
| CASH AT THE END OF THE YEAR                                         | \$ 78,075                      | \$ -          |

The accompanying notes are an integral part of the parent company only financial statements.

(With Deloitte & Touche auditors' report dated February 26, 2019)

# **ASE TECHNOLOGY HOLDING CO., LTD.**

## **NOTES TO PARENT COMPANY ONLY FINANCIAL STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017 (In Thousands of New Taiwan Dollars, Unless Stated Otherwise)**

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### **1. GENERAL INFORMATION**

ASE Technology Holding Co., Ltd. (the “Company”) is a corporation incorporated in Nantze Export Processing Zone under the laws of Republic of China (R.O.C.) starting from April 30, 2018 (date of incorporation). The Company is an industrial investment holding company.

The board of directors of the Company’s subsidiaries, Advanced Semiconductor Engineering, Inc. (symbol “2311”, “ASE”) and Siliconware Precision Industries Co., Ltd. (symbol “2325”, “SPIL”), approved in June 2016 to enter into and execute a joint share exchange agreement to establish the Company and the Company acquired all issued and outstanding ordinary shares of ASE and SPIL in the way of share exchange. The share exchange was conducted at an exchange ratio of 1 ordinary share of ASE for 0.5 ordinary share of the Company, and at NT\$51.2 in cash per SPIL’s ordinary share. The share exchange transaction has been approved both at ASE and SPIL’s special shareholders’ meeting on February 12, 2018 and has been completed on April 30, 2018. As a result, ASE and SPIL became wholly-owned subsidiaries of the Company on April 30, 2018, and both of ASE’s and SPIL’s ordinary shares have been delisted while the ordinary shares of the Company were listed starting from the same date under the symbol “3711”. In addition, ASE’s ordinary shares that have been traded on the New York Stock Exchange (the “NYSE”) under the symbol “ASX” in the form of American Depositary Shares (“ADS”) starting from September 2000 were exchanged as the Company’s ADSs under the same symbol “ASX” starting from April 30, 2018.

For enhancing operational flexibility through organization restructure, the board of directors of ASE resolved in October 2018 to spin off its investment department which was responsible for managing the ordinary shares and assets of USI Inc. (“USIINC”) as well as relevant assets (including assets, liabilities and business) into a newly established company, USI Global Inc. (“USI Global”). USI Global then issued new ordinary shares to the Company as a consideration. In November 2018, the spin off has been completed and the Company has obtained control over ASE and USI Global. In December 2018, the board of directors of the Company and USI Global further resolved to proceed with the merge which was completed in January 2019. After the merger, the Company is the surviving company while USI Global is the dissolving company. The aforementioned spin-off and merger have no material effect on the Company’s financial position and financial performance.

The parent company only financial statements are presented in the Company’s functional currency, New Taiwan dollar (NT\$).

### **2. APPROVAL OF FINANCIAL STATEMENTS**

The parent company only financial statements were approved for issue by the Company’s board of directors on February 26, 2019.

### **3. APPLICATION OF NEW, AMENDED AND REVISED STANDARDS AND INTERPRETATIONS**

- a. Initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) (collectively, the “IFRSs”) endorsed and issued into effect by the Financial Supervisory Commission (FSC)

The initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed and issued into effect by the FSC would not have any material impact on the Company's accounting policies. The Company recognized the following effect from subsidiaries accounted for using the equity method which adopted IFRS 9 and IFRS 15.

1) IFRS 9 "Financial Instruments" and related amendment

|                                                      | IAS 39<br>Carrying<br>Amount as of<br>January 1,<br>2018<br>NT\$ | Reclassifi-<br>cations<br>NT\$ | Remea-<br>surements<br>NT\$ | IFRS 9<br>Carrying<br>Amount as of<br>January 1,<br>2018<br>NT\$ | Retained<br>Earnings<br>Effect on<br>January 1,<br>2018<br>NT\$ | Other Equity<br>Effect on<br>January 1,<br>2018<br>NT\$ |
|------------------------------------------------------|------------------------------------------------------------------|--------------------------------|-----------------------------|------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|
| Investments accounted for using<br>the equity method | <u>\$190,801,543</u>                                             | <u>\$ -</u>                    | <u>\$ 77,414</u>            | <u>\$190,878,957</u>                                             | <u>\$ 358,519</u>                                               | <u>\$ (281,105)</u>                                     |

2) IFRS 15 "Revenue from Contracts with Customers" and related amendment

|                                                      | IAS 18<br>Carrying<br>Amount as of<br>January 1, 2018<br>NT\$ | Adjustments Arising<br>from Initial<br>Application<br>NT\$ | IFRS 15<br>Carrying<br>Amount as of<br>January 1, 2018<br>NT\$ |
|------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------|
| Investments accounted for using<br>the equity method | <u>\$ 190,801,543</u>                                         | <u>\$ 521,849</u>                                          | <u>\$ 191,323,392</u>                                          |
| Retained earnings                                    | <u>\$ 76,406,530</u>                                          | <u>\$ 521,849</u>                                          | <u>\$ 76,928,379</u>                                           |

If the subsidiaries accounted for using the equity method have continuously adopted IAS 18 in 2018, the differences between IFRS 15 and IAS 18 were as follows:

**Impact on assets, liabilities and equity as of December 31, 2018**

|                                                               | NT\$                |
|---------------------------------------------------------------|---------------------|
| Decrease in investments accounted for using the equity method | <u>\$ (933,310)</u> |
| Decrease in retained earnings                                 | <u>\$ (933,310)</u> |

**Impact on total comprehensive income for the year ended December 31, 2018**

|                                             | NT\$                |
|---------------------------------------------|---------------------|
| Decrease in share of profit of subsidiaries | <u>\$ (416,584)</u> |
| Impact on earnings per share:               |                     |
| Decrease in basic earnings per share        | <u>\$ (0.10)</u>    |
| Decrease in diluted earnings per share      | <u>\$ (0.10)</u>    |

- b. Amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed by the FSC for application starting from 2019

| New, Amended or Revised Standards and Interpretations<br>(the "New IFRSs") | Effective Date<br>Announced by IASB (Note 1) |
|----------------------------------------------------------------------------|----------------------------------------------|
|----------------------------------------------------------------------------|----------------------------------------------|

Annual Improvements to IFRSs 2015-2017 Cycle January 1, 2019

(Continued)

| <b>New, Amended or Revised Standards and Interpretations<br/>(the “New IFRSs”)</b> | <b>Effective Date<br/>Announced by IASB (Note 1)</b> |
|------------------------------------------------------------------------------------|------------------------------------------------------|
| Amendments to IFRS 9 “Prepayment Features with Negative Compensation”              | January 1, 2019 (Note 2)                             |
| IFRS 16 “Leases”                                                                   | January 1, 2019                                      |
| Amendments to IAS 19 “Plan Amendment, Curtailment or Settlement”                   | January 1, 2019 (Note 3)                             |
| Amendments to IAS 28 “Long-term Interests in Associate and Joint Venture”          | January 1, 2019                                      |
| IFRIC 23 “Uncertainty over Income Tax Treatments”                                  | January 1, 2019                                      |
|                                                                                    | (Concluded)                                          |

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual periods beginning on or after their respective effective dates.

Note 2: The FSC permits the election for early adoption of the amendments starting from 2018.

Note 3: The Company shall apply these amendments to plan amendments, curtailments or settlements occurring on or after January 1, 2019.

#### IFRS 16 “Leases”

IFRS 16 sets out the accounting standards for leases that will supersede IAS 17, IFRIC 4 and a number of related interpretations.

##### 1) Definition of a lease

Upon initial application of IFRS 16, the Company will elect to apply IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into (or changed) on or after January 1, 2019. Contracts identified as containing a lease under IAS 17 and IFRIC 4 will not be reassessed and will be accounted for in accordance with the transitional provisions under IFRS 16.

##### 2) The Company as lessee

Upon initial application of IFRS 16, the Company will recognize right-of-use assets and lease liabilities for all leases on the parent company only balance sheets except for those whose payments under low-value asset and short-term leases will be recognized as expenses on a straight-line basis. On the parent company only statements of comprehensive income, the Company should present the depreciation expense charged on the right-of-use assets separately from the interest expense accrued on the lease liabilities; interest is computed using the effective interest method. On the parent company only statements of cash flows, cash payments for the principal portion of the lease liabilities will be classified within financing activities; cash payments for the interest portion will be classified within operating activities. Currently, payments under operating lease contracts are recognized as expenses on a straight-line basis. Cash flows for operating leases are classified within operating activities on the parent company only statements of cash flows.

The Company expects to apply the following practical expedients:

- a) The Company will apply a single discount rate to a portfolio of leases with reasonably similar characteristics to measure lease liabilities.
- b) The Company will account for those leases for which the lease term ends on or before December 31, 2019 as short-term leases.

- c) The Company will exclude initial direct costs from the measurement of right-of-use assets on January 1, 2019.
  - d) The Company will use hindsight, such as in determining lease terms, to measure lease liabilities.
- 3) The Company as lessor

The initial application of IFRS 16 is not expected to have any material impact on the Company's accounting policy as lessor.

The initial application of IFRS 16 is not expected to have any material effect on the Company's assets, liabilities and equity as of January 1, 2019.

As of the date the parent company only financial statements were authorized for issue, the Company assesses that the application of the aforementioned amendments and the related amendments to the Regulations Governing the Preparation of Financial Reports by securities Issuers will not have any material impact on the Company's financial position and financial performance.

- c. New IFRSs in issue but not yet endorsed and issued into effect by the FSC

| New IFRSs                                                                                                                | Effective Date<br>Announced by IASB (Note 1) |
|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Amendments to IFRS 3 "Definition of a Business"                                                                          | January 1, 2020 (Note 2)                     |
| Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between An Investor and Its Associate or Joint Venture" | To be determined by IASB                     |
| Amendments to IAS 1 and IAS 8 "Definition of Material"                                                                   | January 1, 2020 (Note 3)                     |

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual periods beginning on or after their respective effective dates.

Note 2: The Company shall apply these amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020 and to asset acquisitions that occur on or after the beginning of that period.

Note 3: The Company shall apply these amendments prospectively for annual reporting periods beginning on or after January 1, 2020.

As of the date the parent company only financial statements were authorized for issue, the Company is continuously assessing the possible impact that the application of other standards and interpretations will have on the Company's financial position and financial performance, and will disclose the relevant impact when the assessment is completed.

#### 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

- a. Statement of compliance

The parent company only financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

- b. Basis of preparation

As disclosed in Note 1, the share exchange between the Company and ASE was an organization restructure under common control that the Company was essentially the continuation of ASE. The

related assets and liabilities in the Company's parent company only financial statements, before the date of incorporation, were recognized based on the carrying amounts of those in ASE's parent company only financial statements. The parent company only financial statements of the Company for prior periods are prepared under the assumption that the Company owned 100% shareholdings of ASE at the very beginning and accounted for ASE as a subsidiary using the equity method.

In addition, as disclosed in Note 1 that ASE has spun off its investment department which was responsible for managing the ordinary shares and assets of USIINC as well as relevant assets (including assets, liabilities and business) into USI Global and USI Global issued new ordinary shares to the Company as the consideration, the transaction was also an organization restructure under common control. The parent company only financial statements of the Company for prior periods are prepared under the assumption that the spin-off has been completed at the very beginning and the Company accounted for USI Global as a subsidiary using the equity method.

The parent company only financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at fair value.

The fair value measurements, which are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and based on the significance of the inputs to the fair value measurement in its entirety, are described as follows:

- 1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
- 2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or a liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- 3) Level 3 inputs are unobservable inputs for an asset or a liability.

When preparing the parent company only financial statements, the Company accounted for subsidiaries by using the equity method. In order to agree with the amount of the net income, other comprehensive income and equity attributable to shareholders of the parent in the consolidated financial statements, the differences of the accounting treatment between the parent company only basis and the consolidated basis are adjusted under the heading of investments accounted for using equity method, share of profits of subsidiaries and share of other comprehensive income of subsidiaries in the parent company only financial statements.

c. Classification of current and non-current assets and liabilities

Current assets include cash and those assets expected to be realized within 12 months after the balance sheet date, unless the asset is restricted from being exchanged or used to settle a liability for at least 12 months after the balance sheet date. Current liabilities are liabilities due to be settled within 12 months after the balance sheet date (even if an agreement to refinance, or to reschedule payments, on a long-term basis is completed after the balance sheet date and before the parent company only financial statements are authorized for issue), and liabilities for which the Company does not have an unconditional right to defer settlement for at least 12 months after the balance sheet date (terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification). Assets and liabilities that are not classified as current are classified as non-current.

d. Investments in subsidiaries

The Company uses the equity method to account for its investments in subsidiaries. A subsidiary is an entity that is controlled by the Company.

Under the equity method, an investment in a subsidiary is initially recognized at cost and adjusted thereafter to recognize the Company's share of the profit or loss and other comprehensive income of the



subsidiary. The Company also recognizes the changes in the Company's share of equity of subsidiaries attributable to the Company.

Changes in the Company's ownership interest in a subsidiary that do not result in the Company losing control of the subsidiary are accounted for as equity transactions. The Company recognizes directly in equity any difference between the carrying amount of the investment and the fair value of the consideration paid or received.

Any excess of the cost of acquisition over the Company's share of the net fair value of the identifiable assets and liabilities of a subsidiary at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized. Any excess of the Company's share of the net fair value of the identifiable assets and liabilities over the cost of acquisition is recognized immediately in profit or loss.

The Company assesses its investment for any impairment by comparing the carrying amount with the estimated recoverable amount as assessed based on the investee's financial statements as a whole. Impairment loss is recognized when the carrying amount exceeds the recoverable amount. If the recoverable amount of the investment subsequently increases, the Company recognizes a reversal of the impairment loss; the adjusted post-reversal carrying amount should not exceed the carrying amount that would have been recognized (net of amortization or depreciation) had no impairment loss been recognized in prior years. An impairment loss recognized on goodwill cannot be reversed in a subsequent period.

Profits or losses resulting from downstream transactions are eliminated in full only in the parent company's financial statements. Profits or losses resulting from upstream transactions and transactions between subsidiaries are recognized only in the parent company's financial statements only to the extent of interests in the subsidiaries that are not related to the Company.

e. Borrowing costs

Borrowing costs are recognized in profit or loss in the period in which they are incurred.

f. Employee benefits

1) Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related services.

2) Retirement benefits

Payments to defined contribution retirement benefit plans are recognized as expenses when employees have rendered services entitling them to the contributions.

g. Share-based payment arrangements

The fair value at the grant date of the employee share options is expensed on a straight-line basis over the vesting period, based on the Company's best estimate of the number of shares that are expected to ultimately vest, with a corresponding increase in capital surplus - employee share options. It is recognized as an expense in full at the grant date if vesting immediately. The grant date of issued ordinary shares for cash which are reserved for employees is the date on which the number of shares that the employees purchase is confirmed.

At each balance sheet date, the Company reviews its estimate of the number of employee share options expected to vest. The impact of the revision of the original estimates is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to the capital

surplus - employee share options.

The grant by the Company of its equity instruments to the employees of a subsidiary under options is treated as a capital contribution. The fair value of employee services received under the arrangement is measured by reference to the grant-date fair value and is recognized over the vesting period as an addition to the investment in the subsidiary, with a corresponding credit to capital surplus - employee share options.

#### h. Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

##### 1) Current tax

According to the Income Tax Law of R.O.C., an additional tax of unappropriated earnings is provided for as income tax in the year the shareholders approve to retain earnings.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

##### 2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities and the corresponding tax bases used in the computation of taxable profit.

If a temporary difference arises from the initial recognition (other than the acquisition of a subsidiary) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit, the resulting deferred tax asset or liability is not recognized. In addition, a deferred tax liability is not recognized on any taxable temporary difference arising from the initial recognition of goodwill included in the investment in the subsidiary.

Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences and unused loss carryforwards to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary difference associated with such investments are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the assets to be recovered. A previously unrecognized deferred tax asset is also reviewed at each balance sheet date and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the period in which the liabilities are settled or assets are realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the balance sheet date. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Company expects, at the balance sheet date, to recover or settle the carrying amount of its assets and liabilities.

3) Current and deferred tax for the year

Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity, respectively.

## 5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Company's accounting policies, which are described in Note 4, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

### Acquisition of Subsidiaries

After the acquisition of a subsidiary, the Company should identify the difference between the investment cost and the Company's share of the net fair value of the subsidiary's identifiable assets acquired and liabilities assumed. It involves critical judgments and estimations when determining the aforementioned net fair values. The management engaged independent external appraiser to assist them in identifying and evaluating the subsidiary's identifiable tangible assets, intangible assets and liabilities, including the type of intangible assets that may be identified and the related estimated cash flows or the relief from expenses. The excess of the fair value over the carrying amounts of those identified tangible and intangible assets on the acquisition date will be depreciated or amortized over their remaining useful lives or expected future economic benefit lives. The management considered that the related estimation and assumption has appropriately reflected the net fair value of those identifiable assets acquired and liabilities assumed. However, there may be of high uncertainty related to the semiconductor industry varied by economic trends.

## 6. INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

The investments accounted for using the equity method were the Company's investments in subsidiaries:

|            | December 31           |               |                       |               |
|------------|-----------------------|---------------|-----------------------|---------------|
|            | 2018                  |               | 2017                  |               |
|            | Amount                | Ownership (%) | Amount                | Ownership (%) |
| ASE        | \$ 102,841,802        | 100.0         | \$ 145,181,017        | 100.0         |
| USI Global | 33,113,607            | 100.0         | 45,620,526            | 100.0         |
| SPIL       | 161,020,782           | 100.0         | -                     | -             |
|            | <u>\$ 296,976,191</u> |               | <u>\$ 190,801,543</u> |               |

Please refer to Note 30 to the Company's consolidated financial statements for the year ended December 31, 2018 for the related disclosures regarding the acquisition of SPIL.

The share of profit or loss and other comprehensive income or loss from the investments in subsidiaries for the years ended December 31, 2018 and 2017 were all based on those subsidiaries' financial statements audited by auditors for the same periods.

## 7. BORROWINGS

The Company's borrowings as of December 31, 2018 were all bank long-term loans:

|                                                                                                                        | <u>December 31, 2018</u> |
|------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Working capital bank loans                                                                                             |                          |
| Syndicated bank loans - repayable through May 2019 to May 2023, annual interest rate was 1.80% as of December 31, 2018 | \$ 55,000,000            |
| Others - repayable on December 2020, annual interest rates was 0.95% as of December 31, 2018                           | <u>400,000</u>           |
|                                                                                                                        | 55,400,000               |
| Less: Unamortized arrangement fee                                                                                      | <u>128,083</u>           |
|                                                                                                                        | 55,271,917               |
| Less: Current portion                                                                                                  | <u>5,371,917</u>         |
|                                                                                                                        | <u>\$ 49,900,000</u>     |

Pursuant to the above syndicated bank loans agreements, the Company should maintain certain financial covenants, including current ratio, leverage ratio, tangible net assets and interest coverage ratio. Such financial ratios are calculated based on the Company's annual audited consolidated financial statements or semi-annual reviewed consolidated financial statements. The Company was in compliance with all of the loan covenants as of December 31, 2018.

## 8. EQUITY

### a. Share capital

#### Ordinary shares

|                                                       | <u>December 31</u>   |                       |
|-------------------------------------------------------|----------------------|-----------------------|
|                                                       | <u>2018</u>          | <u>2017</u>           |
| Numbers of shares authorized (in thousands)           | <u>5,000,000</u>     | <u>10,000,000</u>     |
| Numbers of shares reserved (in thousands)             |                      |                       |
| Employee share options                                | <u>400,000</u>       | <u>800,000</u>        |
| Shares capital authorized                             | <u>\$ 50,000,000</u> | <u>\$ 100,000,000</u> |
| Shares capital reserved                               |                      |                       |
| Employee share options                                | <u>\$ 4,000,000</u>  | <u>\$ 8,000,000</u>   |
| Number of shares issued and fully paid (in thousands) | <u>4,321,714</u>     | <u>8,738,079</u>      |

As disclosed in Note 1, the Company acquired 100% shareholdings of ASE through share exchange at an exchange ratio of 1 ordinary share of ASE for 0.5 ordinary share of the Company. The holders of issued ordinary shares with \$10 per share are entitled the right to vote and receive dividends, except the ordinary shares held by the Company's subsidiaries which are not entitled the right to vote. Before the share exchange, 500,000 thousand ordinary shares included in ASE's authorized shares as of December 31, 2017 were not yet required to complete the share registration process.

In December 2016, ASE's board of directors approved the issue of 300,000 thousand ordinary shares for cash capital increase, and then the ordinary shares were issued at NT\$34.3 per share in March 2017.

ASE has completed the registration formalities for the cash capital increase.

There were 424,258 thousand ordinary shares issued under the conversion of ASE bonds in 2017. The record dates of 323,094 thousand and 101,164 thousand ordinary shares were October 13, 2017 and July 13, 2017, respectively. ASE has completed the registration formalities.

#### American Depositary Receipts

ASE issued ADSs and each ADS represents 5 ordinary shares of ASE. On April 30, 2018, ASE's ADSs were fully exchanged to the Company's ADSs and each of the Company's ADS represents 2 ordinary shares of the Company. As of December 31, 2018 and 2017, 142,042 thousand and 115,261 thousand ADSs were outstanding and represented approximately 280,085 thousand and 576,305 thousand ordinary shares of the Company, respectively.

#### b. Capital surplus

|                                                                                                                                               | <b>December 31</b>    |                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|
|                                                                                                                                               | <b>2018</b>           | <b>2017</b>          |
| <u>May be used to offset a deficit,<br/>distributed as cash dividends,<br/>or transferred to share capital (1)</u>                            |                       |                      |
| Issuance of ordinary shares                                                                                                                   | \$ 12,906,401         | \$ 21,553,853        |
| Merger by share exchange                                                                                                                      | 117,693,658           | -                    |
| Conversion of bonds payable                                                                                                                   | -                     | 1,930,066            |
| Difference between consideration received and the carrying<br>amount of the subsidiaries' net assets during actual disposal or<br>acquisition | <u>6,034,102</u>      | <u>7,176,958</u>     |
|                                                                                                                                               | <u>136,634,161</u>    | <u>30,660,877</u>    |
| <u>May be used to offset a deficit only</u>                                                                                                   |                       |                      |
| Changes in percentage of ownership interest in subsidiaries (2)                                                                               | 3,725,885             | 6,083,444            |
| Treasury share transactions                                                                                                                   | 182,354               | 1,151,345            |
| Exercised employee share options                                                                                                              | 1,366,480             | 1,089,178            |
| Expired share options                                                                                                                         | 645,978               | 223,454              |
| Share of changes in capital surplus of associates                                                                                             | 87,136                | 83,733               |
| Dividends that the claim period has elapsed and unclaimed by<br>shareholders                                                                  | <u>872</u>            | <u>-</u>             |
|                                                                                                                                               | <u>6,008,705</u>      | <u>8,631,154</u>     |
| <u>May not be used for any purpose</u>                                                                                                        |                       |                      |
| Employee share options                                                                                                                        | \$ 583,542            | \$ 960,888           |
| Equity component of convertible bonds                                                                                                         | -                     | 214,022              |
| Others (3)                                                                                                                                    | <u>48,805</u>         | <u>155,936</u>       |
|                                                                                                                                               | <u>632,347</u>        | <u>1,330,846</u>     |
|                                                                                                                                               | <u>\$ 143,275,213</u> | <u>\$ 40,622,877</u> |

- 1) Such capital surplus may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or transferred to share capital (limited to a certain percentage of the Company's capital surplus and once a year).

- 2) Such capital surplus arises from the effect of changes in ownership interest in a subsidiary resulted from equity transactions other than actual disposal or acquisition, or from changes in capital surplus of subsidiaries accounted for using the equity method.
- 3) Such capital surplus represents the excess of the carrying amount of related accounts over the par value due to employee share options exercised.

As disclosed in Note 1, share exchange between the Company and ASE was deemed as an organization restructure under common control and the Company, in accordance with the Interpretation 2011-390 issued by the Accounting Research and Development Foundation, recorded the same amounts of equity which were related to ASE's assets and liabilities (the "continued equity") and then recognized capital surplus arising from merger by share exchange in the amount of the excess of ASE's total equity over the Company's share capital and the continued equity.

In addition, the Company's special shareholders' meeting held in June 2018 resolved to distribute cash in NT\$10,795,980 thousand from capital surplus arising from issuance of ordinary shares.

c. Retained earnings and dividend policy

The Articles of Incorporation of the Company (the "Articles") provides that annual net income shall be distributed in the following order:

- 1) Replenishment of deficits;
- 2) 10.0% as legal reserve;
- 3) Special reserve appropriated or reversed in accordance with laws or regulations set forth by the authorities concerned;
- 4) Addition or deduction of realized gains or losses on equity instruments at fair value through other comprehensive income.

The Articles also provides the policy of the employees' compensation and remuneration of directors, refer to employees' compensation and the remuneration of directors in Note 9(d).

The Company is currently in the mature growth stage. To meet the capital needs for business development now and in the future and satisfy the shareholders' demand for cash inflows, the Company shall use residual dividend policy to distribute dividends, of which the cash dividend is not lower than 30% of the total dividend distribution, with the remainder to be distributed in shares. A distribution plan is also to be made by the board of directors and passed for resolution in the shareholders' meeting.

Appropriation of earnings to legal reserve shall be made until the legal reserve equals the Company's share capital. Legal reserve may be used to offset deficits. If the Company has no deficit and the legal reserve exceeds 25% of the Company's share capital, the excess may be transferred to capital or distributed in cash.

Items referred to under Rule No. 1010012865 and Rule No. 1010047490 issued by the FSC and in the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs" should be appropriated to or reversed from a special reserve by the Company.

d. Other equity items

1) Exchange differences on translating foreign operations

|                                                             | <b>For the Year Ended December 31</b> |                       |
|-------------------------------------------------------------|---------------------------------------|-----------------------|
|                                                             | <b>2018</b>                           | <b>2017</b>           |
| Balance at January 1                                        | \$ (6,732,760)                        | \$ (1,642,724)        |
| Share of subsidiaries accounted for using the equity method | <u>845,085</u>                        | <u>(5,090,036)</u>    |
| Balance at December 31                                      | <u>\$ (5,887,675)</u>                 | <u>\$ (6,732,760)</u> |

2) Unrealized gain (loss) on available-for-sale financial assets

|                                                             | <b>For the Year<br/>Ended<br/>December 31,<br/>2017</b> |
|-------------------------------------------------------------|---------------------------------------------------------|
| Balance at January 1                                        | \$ (240,850)                                            |
| Share of subsidiaries accounted for using the equity method | <u>657,472</u>                                          |
| Balance at December 31                                      | <u>\$ 416,622</u>                                       |

3) Unrealized gain (loss) on financial assets at FVTOCI

|                                                             | <b>For the Year<br/>Ended<br/>December 31,<br/>2018</b> |
|-------------------------------------------------------------|---------------------------------------------------------|
| Balance at January 1 per IAS 39                             | \$ 416,622                                              |
| Adjustment on initial application of IFRS 9 (note 3)        | <u>(281,105)</u>                                        |
| Balance at January 1 per IFRS 9                             | 135,517                                                 |
| Unrealized loss recognized for the year                     |                                                         |
| Share of subsidiaries accounted for using the equity method | (1,016,860)                                             |
| Realized gain recognized for the year                       |                                                         |
| Share of subsidiaries accounted for using the equity method | <u>(133,764)</u>                                        |
| Balance at December 31                                      | <u>\$ (1,015,107)</u>                                   |

e. Treasury shares (in thousand shares)

|                                         | <b>Beginning<br/>Balance</b> | <b>Addition</b> | <b>Decrease</b> | <b>Ending<br/>Balance</b> |
|-----------------------------------------|------------------------------|-----------------|-----------------|---------------------------|
| <u>2018</u>                             |                              |                 |                 |                           |
| Shares held by subsidiaries             | 145,883                      | -               | (72,942)        | 72,941                    |
| Shares reserved for bonds<br>conversion | 120,000                      | -               | (120,000)       | -                         |
|                                         |                              |                 |                 | (Continued)               |

|                                                                                                                      | <b>Beginning<br/>Balance</b> | <b>Addition</b> | <b>Decrease</b>  | <b>Ending<br/>Balance</b>     |
|----------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------|------------------|-------------------------------|
| Shares repurchased from<br>dissenting shareholders in<br>accordance with Business<br>Mergers and Acquisitions<br>Act | <u>-</u>                     | <u>1,852</u>    | <u>(1,852)</u>   | <u>-</u>                      |
|                                                                                                                      | <u>265,883</u>               | <u>1,852</u>    | <u>(194,794)</u> | <u>72,941</u>                 |
| <hr/> 2017 <hr/>                                                                                                     |                              |                 |                  |                               |
| Shares held by subsidiaries                                                                                          | 145,883                      | -               | -                | 145,883                       |
| Shares reserved for bonds<br>conversion                                                                              | <u>120,000</u>               | <u>-</u>        | <u>-</u>         | <u>120,000</u>                |
|                                                                                                                      | <u>265,883</u>               | <u>-</u>        | <u>-</u>         | <u>265,883</u><br>(Concluded) |

The Company or ASE's ordinary shares held by its subsidiaries at each balance sheet date were as follows:

|                               | <b>Shares<br/>Held By<br/>Subsidiaries<br/>(In thousand<br/>shares)</b> | <b>Carrying<br/>amount</b> | <b>Fair Value</b>   |
|-------------------------------|-------------------------------------------------------------------------|----------------------------|---------------------|
| <hr/> December 31, 2018 <hr/> |                                                                         |                            |                     |
| ASE Test Limited              | 44,100                                                                  | \$ 1,380,721               | \$ 2,571,044        |
| J & R Holding Limited         | 23,352                                                                  | 381,709                    | 1,361,415           |
| ASE Test, Inc.                | <u>5,489</u>                                                            | <u>196,677</u>             | <u>320,031</u>      |
|                               | <u>72,941</u>                                                           | <u>\$ 1,959,107</u>        | <u>\$ 4,252,490</u> |
| <hr/> December 31, 2017 <hr/> |                                                                         |                            |                     |
| ASE Test Limited              | 88,200                                                                  | \$ 1,380,721               | \$ 3,364,848        |
| J & R Holding Limited         | 46,704                                                                  | 381,709                    | 1,781,749           |
| ASE Test, Inc.                | <u>10,979</u>                                                           | <u>196,677</u>             | <u>418,840</u>      |
|                               | <u>145,883</u>                                                          | <u>\$ 1,959,107</u>        | <u>\$ 5,565,437</u> |

Fair values of the Company or ASE's ordinary shares held by subsidiaries are based on the closing price from an available published price quotation, which is Level 1 input in terms of IFRS 13, at the balance sheet dates.

In March 2018, ASE's board of directors approved, in accordance with Business Mergers and Acquisitions Act, to repurchase ASE's 1,852 thousand ordinary shares at NT\$38.5 per share held by the shareholders dissenting on the share exchange transaction which has been approved by both of ASE's and SPIL's special shareholders' meetings on February 12, 2018. In addition, ASE's board of directors approved a capital reduction in April 2018 to cancel ASE's 121,852 thousand treasury shares and the record date was April 9, 2018. ASE has completed the registration formalities before April 30, 2018.



ASE issued ordinary shares in connection with its merger with its subsidiaries. The shares held by its subsidiaries were reclassified to treasury shares on the proportion owned by ASE. As disclosed in Note 1, ASE's ordinary shares held by subsidiaries were exchanged to the Company's ordinary shares on April 30, 2018 in accordance with the joint share exchange agreement.

The subsidiaries holding the aforementioned treasury shares retain shareholders' rights except the rights to participate in cash capital increase by cash and voting.

## 9. PROFIT BEFORE INCOME TAX

### a. Other income

|                                                                            | <b>For the Year Ended<br/>December 31, 2018</b> |
|----------------------------------------------------------------------------|-------------------------------------------------|
| Gain on remeasurement of investments accounted for using the equity method | \$ 7,571,882                                    |
| Others                                                                     | <u>(2)</u>                                      |
|                                                                            | <u>\$ 7,571,880</u>                             |

### b. Finance costs

|                                                                             | <b>For the Year Ended<br/>December 31, 2018</b> |
|-----------------------------------------------------------------------------|-------------------------------------------------|
| Total interest expense for financial liabilities measured at amortized cost |                                                 |
| Interests on bank loans                                                     | \$ 965,355                                      |
| Interests on loans from related-parties                                     | 165,534                                         |
| Other finance costs                                                         | <u>114</u>                                      |
|                                                                             | <u>\$ 1,131,003</u>                             |

### c. Employee benefits expense

|                                                  | <b>For the Year Ended<br/>December 31, 2018</b> |
|--------------------------------------------------|-------------------------------------------------|
| Post-employment benefits                         |                                                 |
| Defined contribution plans                       | \$ 1,062                                        |
| Equity-settled share-based payments              | 2,414                                           |
| Other employee benefits                          | <u>128,270</u>                                  |
|                                                  | <u>\$ 131,746</u>                               |
| Summary of employee benefits expense by function |                                                 |
| Operating expenses                               | <u>\$ 131,746</u>                               |

### d. Employees' compensation and the remuneration of directors

The Articles stipulates to distribute employees' compensation and remuneration of directors at the rates in 0.01%-1.00% and no higher than 0.75%, respectively, of net profit before income tax, employees' compensation and remuneration of directors. For the period from April 30, 2018 to December 31, 2018, the employees' compensation and the remuneration of directors were NT\$45,430 thousand and NT\$34,073 thousand which were accrued based on 0.20% and 0.15%, respectively, of net profit before income tax, employees' compensation and remuneration of directors.

If there is a change in the proposed amounts after the parent company only financial statements authorized for issue, the differences are recorded as a change in accounting estimate and will be adjusted in the following year.

## 10. INCOME TAX

### a. Income tax recognized in profit or loss

The Company did not recognize current and deferred tax in profit or loss for the year ended December 31, 2018. A reconciliation of accounting profit and income tax expense is as follows:

|                                                      | <b>For the Year Ended<br/>December 31, 2018</b> |
|------------------------------------------------------|-------------------------------------------------|
| Profit before income tax                             | <u>\$ 25,262,356</u>                            |
| Income tax expense calculated at the statutory rate  | \$ 5,052,471                                    |
| Nondeductible expenses in determining taxable income | 226,178                                         |
| Tax-exempt income                                    | (5,319,679)                                     |
| Unrecognized loss carryforwards                      | <u>41,030</u>                                   |
| Income tax expense recognized in profit or loss      | <u>\$ -</u>                                     |

The corporate income tax rate was 20% in 2018 and the rate of the corporate surtax applicable to the 2018 unappropriated earnings will be 5%.

As the status of 2019 appropriations of earnings is uncertain, the potential income tax consequences of 2018 unappropriated earnings are not reliably determinable.

### b. Deductible temporary differences, unused loss carryforwards and unused investment credits for which no deferred tax assets have been recognized in the balance sheets

As of December 31, 2018, unused loss carryforwards for which no deferred tax assets have been recognized in the balance sheet was NT\$41,030 thousand, which will be expired in 2028.

### c. Income tax assessments

There was no assessment since the Company has not yet filed its tax returns.

## 11. EARNINGS PER SHARE

The earnings and weighted average number of ordinary shares outstanding in the computation of earnings per share were as follows:

### Net profit for the year

|                                                 | <b>For the Year Ended December 31</b> |               |
|-------------------------------------------------|---------------------------------------|---------------|
|                                                 | <b>2018</b>                           | <b>2017</b>   |
| Profit for the year                             | \$ 25,262,356                         | \$ 22,987,819 |
| Effect of potentially dilutive ordinary shares: |                                       |               |
| From subsidiaries                               | (418,295)                             | (813,627)     |
|                                                 |                                       | (Continued)   |

|                                                                | <b>For the Year Ended December 31</b> |                                     |
|----------------------------------------------------------------|---------------------------------------|-------------------------------------|
|                                                                | <b>2018</b>                           | <b>2017</b>                         |
| From the investments in associates                             | \$ -                                  | \$ (367,687)                        |
| From convertible bonds                                         | -                                     | 93,781                              |
| Earnings used in the computation of diluted earnings per share | <u>\$ 24,844,061</u>                  | <u>\$ 21,900,286</u><br>(Concluded) |

Weighted average number of ordinary shares outstanding (in thousand shares):

|                                                                                           | <b>For the Year Ended December 31</b> |                  |
|-------------------------------------------------------------------------------------------|---------------------------------------|------------------|
|                                                                                           | <b>2018</b>                           | <b>2017</b>      |
| Weighted average number of ordinary shares in the computation of basic earnings per share | 4,245,247                             | 4,080,443        |
| Effect of potentially dilutive ordinary shares:                                           |                                       |                  |
| From convertible bonds                                                                    | -                                     | 62,456           |
| From employee share options                                                               | 5,103                                 | 19,934           |
| From employees' compensation                                                              | <u>779</u>                            | <u>21,787</u>    |
| Weighted average number of ordinary shares in computation of diluted earnings per share   | <u>4,251,129</u>                      | <u>4,184,620</u> |

The share exchange between the Company and ASE was deemed as an organization restructure under common control, and the earnings per share of the prior period were calculated based on the weighted average number of ordinary shares outstanding retrospectively adjusted in accordance with the share exchange ratio stated in the joint share exchange agreement.

The Company is able to settle the employees' compensation in cash or shares. The Company assumed that the entire amount of the compensation would be settled in shares, and the resulting potential shares were included in the weighted average number of ordinary shares outstanding used in the computation of diluted earnings per share if the effect is dilutive. Such dilutive effect of the potential shares was included in the computation of diluted earnings per share until the shareholders approve the number of shares to be distributed to employees at their meeting in the following year.

The third unsecured convertible overseas bonds issued by ASE were anti-dilutive for the year ended December 31, 2017 and were excluded from the computation of diluted earnings per share for the respective year.

## 12. SHARE-BASED PAYMENT ARRANGEMENTS

### a. Employee share option plans of the Company

#### The Company's Option Plan

In order to attract, retain and reward employees, the Company has its employee share option plan for full-time employees of the Company and its subsidiaries and granted 150,000 thousand share options in 2018. Each share option represents the right to purchase one ordinary share of the Company when exercised. Under the terms of the plan, share options are granted at an exercise price equal to or not less than the closing price of the ordinary shares listed on the Taiwan Stock Exchange (TSE) at the effective date of the plan. The right of those share options granted under the plan is valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date. For any subsequent changes in the Company's capital structure or when cash dividend per ordinary share exceeds 1.5% of the market price per ordinary share, the exercise price is accordingly

adjusted.

### ASE's Option Plans

ASE had five employee share option plans for the Group's full-time employees. Each share option represents the right to purchase one ordinary share of ASE when exercised. Under the terms of the plans, share options were granted at an exercise price equal to or not less than the closing price of the ordinary shares listed on the TSE at the effective date of the plan. The option rights of these plans were valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date. For any subsequent changes in ASE's capital structure, the exercise price was accordingly adjusted. As disclosed in Note 1, the Company assumed ASE's obligations of outstanding employee share option plans starting from April 30, 2018, and each share option represents the right to purchase 0.5 ordinary share of the Company with all other terms and conditions held constant.

Information about share options for the period from January 1, 2018 to April 29, 2018 and for the year ended December 31, 2017 was as follows:

|                                                                                                | <b>For the Period from<br/>January 1, 2018<br/>to April 29, 2018</b> |                                                                             | <b>For the Year Ended<br/>December 31, 2017</b>     |                                                                             |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------|
|                                                                                                | <b>Number of<br/>Options<br/>(In<br/>Thousands)</b>                  | <b>Weighted<br/>Average<br/>Exercise<br/>Price<br/>Per Share<br/>(NT\$)</b> | <b>Number of<br/>Options<br/>(In<br/>Thousands)</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price<br/>Per Share<br/>(NT\$)</b> |
| Balance, beginning of period                                                                   | 135,961                                                              | \$ 30.2                                                                     | 210,795                                             | \$ 27.3                                                                     |
| Options forfeited                                                                              | (1,692)                                                              | 36.3                                                                        | (5,407)                                             | 36.3                                                                        |
| Options expired                                                                                | -                                                                    | -                                                                           | (1,790)                                             | 21.1                                                                        |
| Options exercised                                                                              | (20,557)                                                             | 26.0                                                                        | (67,637)                                            | 21.0                                                                        |
| Options transferred to the Company in<br>accordance with the joint share<br>exchange agreement | <u>(113,712)</u>                                                     | 30.9                                                                        | <u>-</u>                                            | -                                                                           |
| Balance, end of period                                                                         | <u>-</u>                                                             | -                                                                           | <u>135,961</u>                                      | 30.2                                                                        |
| Options exercisable, end of period                                                             | <u>-</u>                                                             | -                                                                           | <u>85,642</u>                                       | 26.5                                                                        |

Starting from April 30, 2018, information about the share option plans that the Company granted and assumed was as follows:

|                              | <b>For the Year Ended December 31, 2018</b>     |                                                                     |
|------------------------------|-------------------------------------------------|---------------------------------------------------------------------|
|                              | <b>Number of<br/>Options<br/>(In Thousands)</b> | <b>Weighted Average<br/>Exercise Price<br/>Per Share<br/>(NT\$)</b> |
| Balance, beginning of period | \$ -                                            | \$ -                                                                |
| Transferred from ASE         | 56,856                                          | 61.7                                                                |
| Options granted              | 131,863                                         | 56.4                                                                |
| Options forfeited            | (1,582)                                         | 71.5                                                                |
| Options exercised            | <u>(3,323)</u>                                  | 43.6                                                                |

(Continued)

|                                      | <b>For the Year Ended December 31, 2018</b>     |                                                                     |
|--------------------------------------|-------------------------------------------------|---------------------------------------------------------------------|
|                                      | <b>Number of<br/>Options<br/>(In Thousands)</b> | <b>Weighted Average<br/>Exercise Price<br/>Per Share<br/>(NT\$)</b> |
| Balance, end of period               | <u>\$ 183,814</u>                               | \$ 58.1                                                             |
| Options exercisable, end of period   | <u>36,354</u>                                   | 58.1                                                                |
| Fair value of options granted (NT\$) | <u>\$16.28-19.12</u>                            |                                                                     |
|                                      |                                                 | (Concluded)                                                         |

The weighted average share price at exercise dates of share options for the period from April 30, 2018 to December 31, 2018, the period from January 1, 2018 to April 29, 2018, and the year ended December 31, 2017 was NT\$68.5, NT\$41.0 and NT\$37.6, respectively. The options granted in 2007 by ASE were expired in December 2017 and, therefore, NT\$47,087 thousand was reclassified from capital surplus arising from employee share options to capital surplus arising from expired share options.

Information about the outstanding share options that the Company granted and assumed at each balance sheet date was as follows:

|                                           | <b>Range of<br/>Exercise Price<br/>Per Share<br/>(NT\$)</b> | <b>Weighted<br/>Average<br/>Remaining<br/>Contractual<br/>Life (Years)</b> |
|-------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>December 31, 2018</b>                  |                                                             |                                                                            |
| ASE 4 <sup>th</sup> share options         | \$ 40.8-45.2                                                | 1.5                                                                        |
| ASE 5 <sup>th</sup> share options         | 73.0                                                        | 6.7                                                                        |
| The Company 1 <sup>st</sup> share options | 56.4                                                        | 9.9                                                                        |
| <b>December 31, 2017</b>                  |                                                             |                                                                            |
| ASE 4 <sup>th</sup> share options         | 20.4-22.6                                                   | 2.5                                                                        |
| ASE 5 <sup>th</sup> share options         | 36.5                                                        | 7.7                                                                        |

For the year ended December 31, 2018, employee benefit expense recognized by the Company was NT\$2,414 thousand.

b. Fair value of share options

The fair value of share options granted by the Company was measured the using trinomial tree model and the inputs to the model were as follows:

|                               |                     |
|-------------------------------|---------------------|
| Share price at the grant date | NT\$58.80 per share |
| Exercise price                | NT\$56.40 per share |
| Expected volatility           | 27.77%-28.86%       |
| Expected lives                | 4.8 years-7.0 years |
| Expected dividend yield       | -                   |
| Risk free interest rate       | 0.73%-0.80%         |

Expected volatility was based on the Company and ASE's historical share prices volatility.

### 13. CASH FLOWS INFORMATION

#### a. Non-cash transaction

For the year ended December 31, 2018, the Company entered into the following non-cash investing activities which were not reflected in the parent company only statements of cash flows:

|                                                                                         |                       |
|-----------------------------------------------------------------------------------------|-----------------------|
| Dividends receivable from subsidiaries                                                  | \$ 91,689,318         |
| Less: Payable for consideration representing the ordinary shares originally held by ASE | <u>(53,109,760)</u>   |
|                                                                                         | <u>\$ 38,579,558</u>  |
| Consideration transferred for acquisition of SPIL                                       | \$ 173,657,543        |
| Less: Payable for consideration representing the ordinary shares originally held by ASE | <u>(53,109,760)</u>   |
|                                                                                         | <u>\$ 120,547,783</u> |

#### b. Changes in liabilities arising from financing activities

|                               | <b>Long-term Borrowings</b> |
|-------------------------------|-----------------------------|
| Balance at January 1, 2018    | \$ -                        |
| Financing cash flows          | 55,085,000                  |
| Non-cash changes              |                             |
| Amortization of issuance cost | <u>186,917</u>              |
| Balance at December 31, 2018  | <u>\$ 55,271,917</u>        |

### 14. CAPITAL MANAGEMENT

The capital structure of the Company consists of debt and equity. The Company manages its capital to ensure that the Company will be able to continue as going concerns while maximizing the return to shareholders through the optimization of the debt and equity balance. Key management personnel of the Company periodically reviews the cost of capital and the risks associated with each class of capital. In order to balance the overall capital structure, the Company may adjust the amount of dividends paid to shareholders, the number of new shares issued or repurchased, and the amount of new debt issued or existing debt redeemed.

The Company is not subject to any externally imposed capital requirements except those discussed in Note 7.

## 15. FINANCIAL INSTRUMENTS

### a. Categories of financial instruments

**December 31, 2018**

| Financial assets                    |            |
|-------------------------------------|------------|
| Measured at amortized cost (Note 1) | \$ 84,747  |
| Financial liabilities               |            |
| Measured at amortized cost (Note 2) | 94,048,602 |

Note 1: The balances included financial assets measured at amortized cost, which comprise cash and other receivables.

Note 2: The balances included financial liabilities measured at amortized cost, which comprise other payables (including other payables to related parties) and long-term borrowings (including current portion).

### b. Financial risk management objectives and policies

The Company is an industrial investment holding company, and the financial risk management objectives and policies are disclosed in Note 36 to the Company's consolidated financial statements.

#### 1) Market risk

The Company borrowed funds at floating interest rates. As of December 31, 2018, the financial assets and the financial liabilities exposed to interest rate risk were NT\$78,075 thousand and NT\$94,000,000 thousand, respectively.

For the assets and the liabilities with floating interest rates, a 100-basis point increase or decrease was used when reporting interest rate risk internally to key management personnel. If interest rates had been 100 basis points (1%) higher or lower and all other variables held constant, the Company's profit before income tax for the year ended December 31, 2018 would have decreased or increased approximately by NT\$940,000 thousand.

#### 2) Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Company. The Company's credit risk arises from cash. The Company's maximum exposure to credit risk was the carrying amounts of financial assets in the balance sheets.

#### 3) Liquidity risk

The Company manages liquidity risk by maintaining adequate banking facilities to fulfill the demand for cash flow used in the Company's operation. The Company also monitors its compliance with all the loan covenants. Liquidity risk is not considered to be significant.

In the table below, financial liabilities with a repayment on demand clause were included in the earliest time band regardless of the probability of counter-parties choosing to exercise their rights. The maturity dates for other non-derivative financial liabilities were based on the agreed repayment dates.

To the extent that interest flows are floating rate, the undiscounted amounts were derived from the interest rates at each balance sheet date.

| December 31, 2018                    | On Demand or<br>Less than<br>1 Month | 1 to 3 Months     | 3 Months to<br>1 Year | More than 1 Year     |
|--------------------------------------|--------------------------------------|-------------------|-----------------------|----------------------|
| Non-derivative financial liabilities |                                      |                   |                       |                      |
| Non-interest bearing                 | \$ 85,080                            | \$ 353            | \$ 5,763              | \$ -                 |
| Floating interest rate liabilities   | <u>82,679</u>                        | <u>165,358</u>    | <u>44,786,459</u>     | <u>52,004,044</u>    |
|                                      | <u>\$ 167,759</u>                    | <u>\$ 165,711</u> | <u>\$ 44,792,222</u>  | <u>\$ 52,004,044</u> |

The amounts included above for floating interest rate instruments for non-derivative financial liabilities was subject to change if changes in floating interest rates differ from those estimates of interest rates determined at each balance sheet date.

## 16. RELATED PARTY TRANSACTIONS

The significant transactions between the Company and its related parties are summarized as follows:

### a. Related parties

| Related Party Name   | Relationship with the Company |
|----------------------|-------------------------------|
| ASE                  | Subsidiary                    |
| ASE Test, Inc.       | Sub-subsidiary                |
| ASE Electronics Inc. | Sub-subsidiary                |

### b. Loans from related parties

| Related Party Category / Name         | December 31, 2018    |
|---------------------------------------|----------------------|
| Subsidiary / ASE                      | \$ 29,900,000        |
| Sub-subsidiary / ASE Test, Inc.       | 8,000,000            |
| Sub-subsidiary / ASE Electronics Inc. | <u>700,000</u>       |
|                                       | <u>\$ 38,600,000</u> |

### Interest expense

| Related Party Category / Name         | For the Year Ended<br>December 31, 2018 |
|---------------------------------------|-----------------------------------------|
| Subsidiary / ASE                      | \$ 142,639                              |
| Sub-subsidiary / ASE Test, Inc.       | 22,711                                  |
| Sub-subsidiary / ASE Electronics Inc. | <u>184</u>                              |
|                                       | <u>\$ 165,534</u>                       |

The interest rates for the loans from related parties were comparable to market interest rates. The loans from related parties were all unsecured.



c. Endorsements and guarantees provided by related parties

|                                      | <b>December 31, 2018</b> |
|--------------------------------------|--------------------------|
| <b>Related Party Category / Name</b> |                          |
| Subsidiary / ASE                     |                          |
| Endorsement/guarantee amount         | <u>\$ 55,075,819</u>     |
| Amount actually drawn                | <u>\$ 55,075,819</u>     |

d. Compensation to key management personnel

|                              | <b>For the Year Ended<br/>December 31, 2018</b> |
|------------------------------|-------------------------------------------------|
| Short-term employee benefits | \$ 137,395                                      |
| Share-based payments         | <u>1,840</u>                                    |
|                              | <u>\$ 139,235</u>                               |

The compensation to the Company's key management personnel is determined according to personal performance and market trends.

## 17. SIGNIFICANT EVENTS AFTER REPORTING PERIOD

In December 2018, the Company was approved by its board of directors and Ministry of Economic Affairs, R.O.C. to merger USI Global. The merger was subsequently completed in January 2019 and the Company survived while USI Global was dissolved. After the merger, the Company directly holds 100% shareholdings of USIINC.

## 18. ADDITIONAL DISCLOSURES

The following are the additional disclosures required by the Securities and Futures Bureau for the Company:

- a. Financial provided: None;
- b. Endorsement/guarantee provided: None;
- c. Marketable securities held (excluding investments in subsidiaries, associates and joint ventures): None;
- d. Marketable securities acquired and disposed of at costs or prices of at least NT\$300 million or 20% of the paid-in capital: None;
- e. Acquisition of individual real estate properties at costs of at least NT\$300 million or 20% of the paid-in capital: None;
- f. Disposal of individual real estate properties at prices of at least NT\$300 million or 20% of the paid-in capital: None;
- g. Total purchases from or sales to related parties of at least NT\$100 million or 20% of the paid-in capital: None;
- h. Receivables from related parties amounting to at least NT\$100 million or 20% of the paid-in capital: None;

- i. Information about the derivative financial instruments transaction: None;
- j. Names, locations, and related information of investees over which the Company exercises significant influence (excluding information on investment in mainland China): Please see table;
- k. Information on investment in mainland China
  - 1) The name of the investee in mainland China, the main businesses and products, its issued capital, method of investment, information on inflow or outflow of capital, percentage of ownership, income (losses) of the investee, share of profits/losses of investee, ending balance, amount received as dividends from the investee, and the limitation on investee: None;
  - 2) Any of the following significant transactions with investee companies in mainland China, either directly or indirectly through a third party, and their prices, payment terms, and unrealized gains or losses:
    - a) The amount and percentage of purchases and the balance and percentage of the related payables at the end of the year: None;
    - b) The amount and percentage of sales and the balance and percentage of the related receivables at the end of the year: None;
    - c) The amount of property transactions and the amount of the resultant gains or losses: None;
    - d) The balance of negotiable instrument endorsements or guarantees or pledges of collateral at the end of the year and the purposes: None;
    - e) The highest balance, the end of year balance, the interest rate range, and total current year interest with respect to financing of funds: None;
    - f) Other transactions that have a material effect on the profit or loss for the year or on the financial position, such as the rendering or receiving of services: None.

**ASE TECHNOLOGY HOLDING CO., LTD.**

**NAMES, LOCATIONS, AND RELATED INFORMATION OF INVESTEEES OVER WHICH THE COMPANY EXERCISES SIGNIFICANT INFLUENCE  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(In Thousands of New Taiwan Dollar)**

| Investor Company | Investee Company | Location | Main Businesses and Products                                             | Original Investment Amount |                         | Balance as of December 31, 2018 |                            |                 | Net Income (Losses)<br>of the Investee | Share of Profits / Losses<br>of Investee | Note       |
|------------------|------------------|----------|--------------------------------------------------------------------------|----------------------------|-------------------------|---------------------------------|----------------------------|-----------------|----------------------------------------|------------------------------------------|------------|
|                  |                  |          |                                                                          | December 31, 2018          | December 31, 2017(Note) | Shares                          | Percentage of<br>Ownership | Carrying Amount |                                        |                                          |            |
| The Company      | ASE              | Taiwan   | Engaged in the packaging and testing of semiconductors and EMS           | \$ 174,352,839             | \$ -                    | 5,528,783,764                   | 100                        | \$ 102,841,802  | \$ 15,112,814                          | \$ 15,064,021                            | Subsidiary |
|                  | SPIL             | Taiwan   | Engaged in assembly, testing and turnkey services of integrated circuits | 173,657,530                | -                       | 3,391,748,878                   | 100                        | 161,020,782     | 7,824,233                              | 3,526,516                                | Subsidiary |
|                  | USI Global       | Taiwan   | Investment activities                                                    | 31,080,000                 | -                       | 30,000,000                      | 100                        | 33,113,607      | 435,975                                | 435,975                                  | Subsidiary |

Note: As disclosed in Notes 1 and 4, the share exchange between the Company and ASE was an organization restructure under common control and the Company was essentially the continuation of ASE. The related assets and liabilities in the Company’s parent company only financial statements were recognized based on the carrying amounts of those in ASE’s parent company only financial statements. The parent company only financial statements of the Company for prior periods were prepared under the assumption that the Company owned 100% shareholdings of ASE at the very beginning and accounted for ASE as a subsidiary using the equity method. In addition, ASE spun off its investment department which was responsible for managing the ordinary shares and assets of USIINC as well as relevant assets (including assets, liabilities and business) into USI Global and USI Global issued new ordinary shares to the Company as the consideration. The transaction was also an organization restructure under common control. The parent company only financial statements of the Company for prior periods were prepared under the assumption that the spin-off has been completed at the very beginning and the Company accounted for USI Global as a subsidiary using the equity method.

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## ASE TECHNOLOGY HOLDING CO., LTD.

## STATEMENT OF CHANGES IN INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

FOR THE YEAR ENDED DECEMBER 31, 2018

(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

| Investees        | Balance, Beginning of Year<br>(Note 1) |                       | Increase in Investment<br>(Note 2) |                       | Decrease in Investment<br>(Note 2) |                      | Balance, End of Year     |     |                       | Market Value or Net Assets Value<br>(Note 3) |                       |            |
|------------------|----------------------------------------|-----------------------|------------------------------------|-----------------------|------------------------------------|----------------------|--------------------------|-----|-----------------------|----------------------------------------------|-----------------------|------------|
|                  | Shares<br>(In Thousands)               | Amount                | Shares<br>(In Thousands)           | Amount                | Shares<br>(In Thousands)           | Amount               | Shares<br>(In Thousands) | %   | Amount                | Unit Price<br>(NT Dollar)                    | Total Amount          | Collateral |
| Ordinary shares  |                                        |                       |                                    |                       |                                    |                      |                          |     |                       |                                              |                       |            |
| Unlisted company |                                        |                       |                                    |                       |                                    |                      |                          |     |                       |                                              |                       |            |
| ASE              | 5,528,783,764                          | \$ 145,181,017        | -                                  | \$ -                  | -                                  | \$ 42,339,215        | 5,528,783,764            | 100 | \$ 102,841,802        | \$ 19.38                                     | \$ 107,143,084        | Nil        |
| SPIL             | -                                      | -                     | 3,391,748,878                      | 161,020,782           | -                                  | -                    | 3,391,748,878            | 100 | 161,020,782           | 22.06                                        | 74,816,088            | Nil        |
| USI Global       | 30,000,000                             | <u>45,620,526</u>     | -                                  | <u>-</u>              | -                                  | <u>12,506,919</u>    | 30,000,000               | 100 | <u>33,113,607</u>     | 1,103.79                                     | <u>33,113,606</u>     | Nil        |
|                  |                                        | <u>\$ 190,801,543</u> |                                    | <u>\$ 161,020,782</u> |                                    | <u>\$ 54,846,134</u> |                          |     | <u>\$ 296,976,191</u> |                                              | <u>\$ 215,072,778</u> |            |

Note 1: As disclosed in Notes 1 and 4, the share exchange between the Company and ASE was an organization restructure under common control and the Company was essentially the continuation of ASE. The related assets and liabilities in the Company's parent company only financial statements were recognized based on the carrying amounts of those in ASE's parent company only financial statements. The parent company only financial statements of the Company for prior periods were prepared under the assumption that the Company owned 100% shareholdings of ASE at the very beginning and accounted for ASE as a subsidiary using the equity method. In addition, ASE spun off its investment department which was responsible for managing the ordinary shares and assets of USIINC as well as relevant assets (including assets, liabilities and business) into USI Global and USI Global issued new ordinary shares to the Company as the consideration. The transaction was also an organization restructure under common control. The parent company only financial statements of the Company for prior periods were prepared under the assumption that the spin-off has been completed at the very beginning and the Company accounted for USI Global as a subsidiary using the equity method.

Note 2: Increase and decrease in investments during the year consisted of the acquisition of subsidiaries, share of profit (loss) and other comprehensive income (loss) of subsidiaries and cash dividends distributed by subsidiaries.

Note 3: Unit price of net assets is calculated based on the subsidiaries' financial statements and the shareholdings the Company held.

## ASE TECHNOLOGY HOLDING CO., LTD.

## STATEMENT OF LONG-TERM LOANS

AS OF DECEMBER 31, 2018

(In Thousands of New Taiwan Dollars)

| Creditor                                      | Credit Amount Dominated in Original Currency,<br>Contract Period and Payment Term                                         | Range of<br>Interest Rates<br>(%) | Balance, End of Year |                      |                      | Collateral |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------|----------------------|----------------------|------------|
|                                               |                                                                                                                           |                                   | Due within 1 year    | Due over 1 year      | Total                |            |
| Syndicated bank loans<br>Bank of Taiwan, etc. | 10%, 15%, 15%, 20% and 40% of the total credit<br>amount will be repayable through May 2019 to May<br>2023, respectively. | 1.80%                             | \$ 5,500,000         | \$ 49,500,000        | \$ 55,000,000        | Nil        |
| Others<br>Standard and Chartered              | Repayable in December 2020                                                                                                | 0.95%                             | -                    | 400,000              | 400,000              | Nil        |
|                                               | Less: Unamortized arrangement fee                                                                                         |                                   | <u>(128,083 )</u>    | <u>-</u>             | <u>(128,083 )</u>    |            |
|                                               |                                                                                                                           |                                   | <u>\$ 5,371,917</u>  | <u>\$ 49,900,000</u> | <u>\$ 55,271,917</u> |            |

**ASE TECHNOLOGY HOLDING CO., LTD.**

**STATEMENT OF OPERATING EXPENSES  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(In Thousands of New Taiwan Dollars)**

---

| <b>Item</b>                 | <b>Operating<br/>Expenses</b> |
|-----------------------------|-------------------------------|
| Payroll and related expense | \$ 120,633                    |
| Professional fees           | 27,817                        |
| Insurance                   | 13,323                        |
| Others                      | <u>43,695</u>                 |
|                             | <u>\$ 205,468</u>             |

**ASE TECHNOLOGY HOLDING CO., LTD.**

**STATEMENT OF LABOR BY FUNCTION  
FOR THE YEAR ENDED DECEMBER 31, 2018  
(In Thousands of New Taiwan Dollars)**

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|                            | <b><u>Classified as<br/>Operating<br/>Expenses</u></b> |
|----------------------------|--------------------------------------------------------|
| Labor cost                 |                                                        |
| Salary                     | \$ 85,253                                              |
| Labor and health insurance | 3,936                                                  |
| Pension                    | 1,062                                                  |
| Compensation to directors  | 35,380                                                 |
| Others                     | <u>6,115</u>                                           |
|                            | <u>\$ 131,746</u>                                      |

Note: As of December 31, 2018, the Company had 56 employees within which 12 directors were not employed by the Company.





**ASE Technology Holding Co., Ltd.**

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