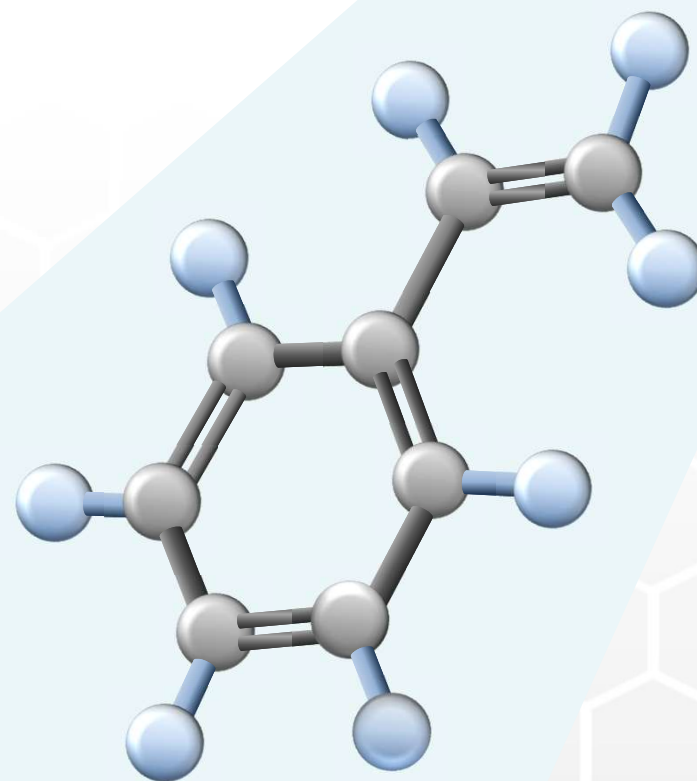




台灣苯乙烯工業股份有限公司
Taiwan Styrene Monomer Co.

Taiwan Styrene Monomer Co. Investor Conference

Sep.16, 2020

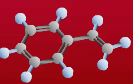


Disclaimer

This report discloses forecast on operation and revenue. The actual result might be different from today's forecast as the company could not control the uncontrollable factors the forecast was based on.

These uncontrollable factors could come from all directions including the change of supply and demand, price adjustment, competition, global economy, supply chains and exchange rates and many other unpredictable factors.

TSMC is not responsible for updating the contents in this report shall any changes occur or would TSMC send out notifications or reminders for the same. This report does not solicit investments and should not be used as investment guide; TSMC is not responsible for any loss or damage incurred due to this report.



Agenda

1

Corporate Profile

2

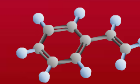
Market Review & Outlook

3

Financial Review

4

Q & A



Company Highlight

Founded

Nov. 16, 1979

Listed on TWSE

Aug., 1987

Paid In Capital

**5,278.70 M
NTD**

Consolidated Revenue (2020)

**8,113.23 M
NTD**

Managing Group

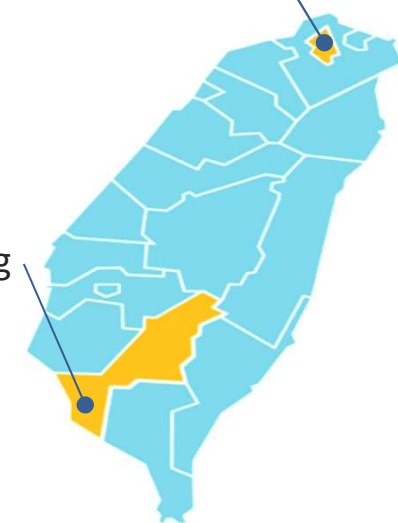
Chairman : Wen-Yuan Lin
GM : T.K. Chung

Employee

189
(by Jun. 30, 2021)

Taipei HQ Office
8F.-1, No.6, Sec. 1, Roosevelt Rd., Taipei
+886-2-2396-6007

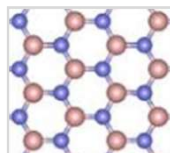
Kaohsiung Plant
Linyuan Industrial Park
No.7, Gongye 1st Rd., Kaohsiung
+886-7-641-4511



TSMC Group



Petrochemical



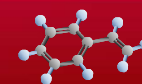
Materials



Investment
Development



Hospitality



Quality Policy

**T****Technology**

Enhance professional technologies

S**Services**

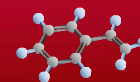
Provide comprehensive services

M**Management**

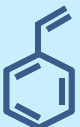
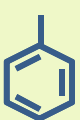
Enforce total management

C**Consistency**

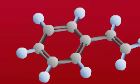
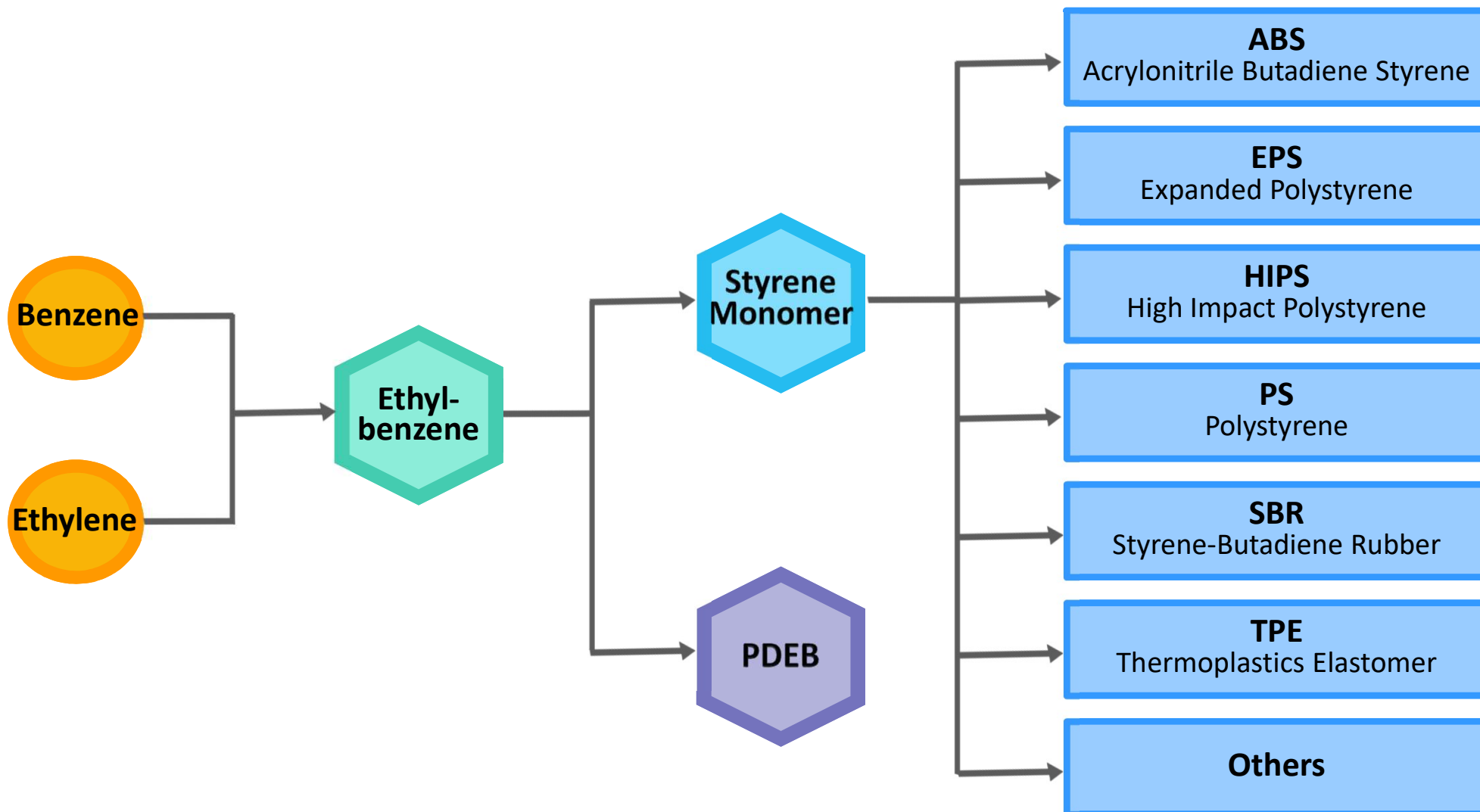
Ensure quality consistency



Major Products

Products	Applications	Capacities (tons/year)	2020 Sales by Products
 Styrene Monomer	The major source material for polystyrene (PS), acrylonitrile butadiene styrene (ABS), styrene-butadiene rubber (SBR) and other polymers.	340,000	 94.35%
 PDEB	The specialty chemical mainly used as a desorbent for producing Para-xylene in Parex process and Fluxy process.	7,000	 1.94%
 Toluene	The by-product of the styrene production process, mainly used as an organic solvent.	8,700	 1.50%
 Ethylbenzene	The intermediate product of the styrene production process, used as the solvent of polystyrene.	380,000	 0.20%

SM Production Materials and Products

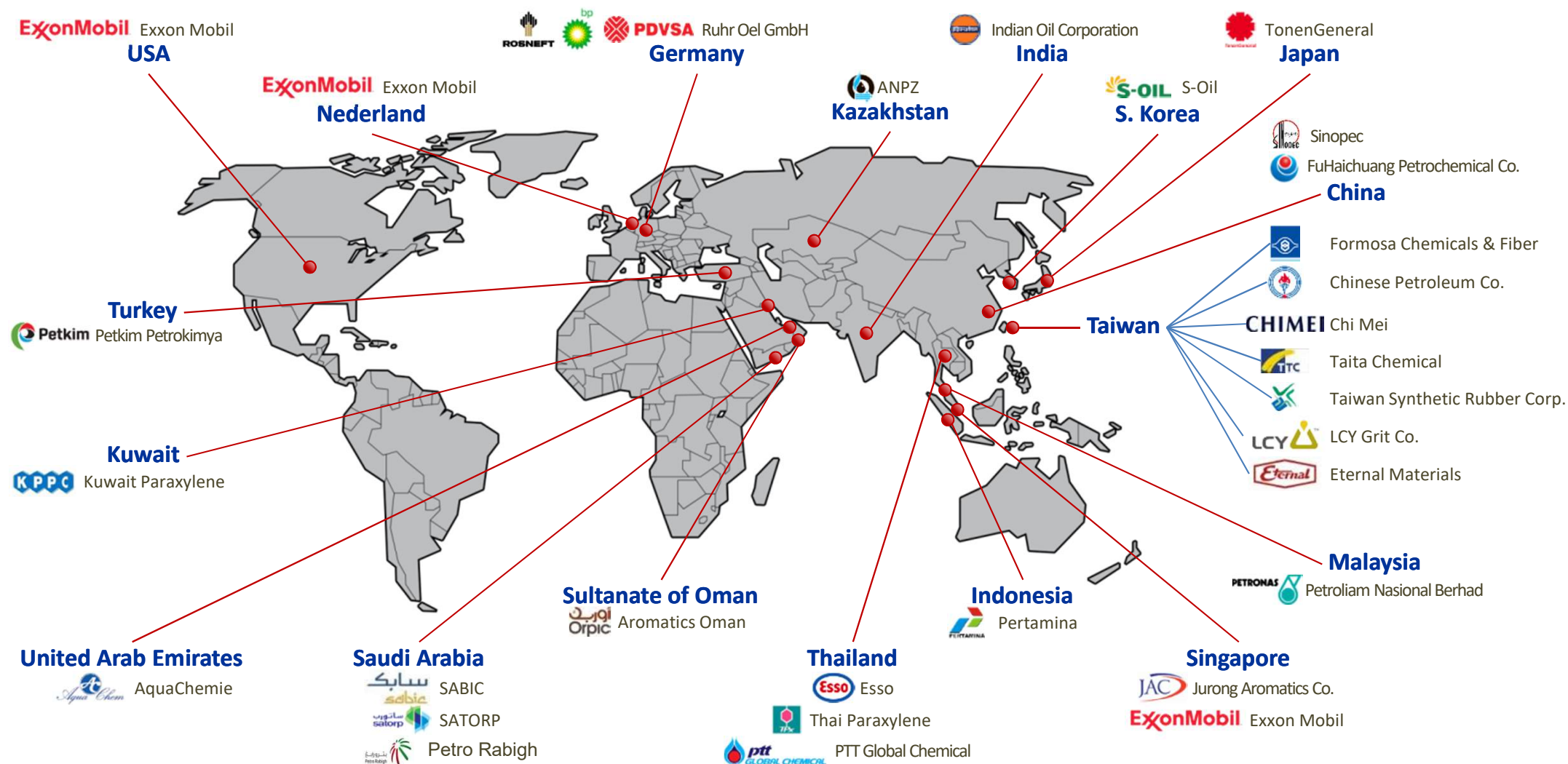


SM Downstream Products and Applications

Product	Acronym	Applications	
Acrylonitrile Butadiene Styrene	ABS	auto parts, household appliances, computer case, acrylic board, toys, motorcycle case, luggage case	
Expanded Polystyrene	EPS	packaging, insulation, construction, artwork and floating materials, partition board, ice box, cake box	
High Impact Polystyrene	HIPS	keyboard, mouse, computer case, disposable tableware	
Polystyrene	PS	CD/DVD box, ballpoint pen, X'mas light	
Styrene-Butadiene Rubber	SBR (SSBR)	rubber/color soles, tire	
Thermoplastics Elastomer	TPE	auto, electronic & household appliances	
Unsaturated Polyester Resins	UPR	thermoset composite applications, button	
Emulsion Styrene-Butadiene Rubber	E-SBR	mats, rubber goods and others	

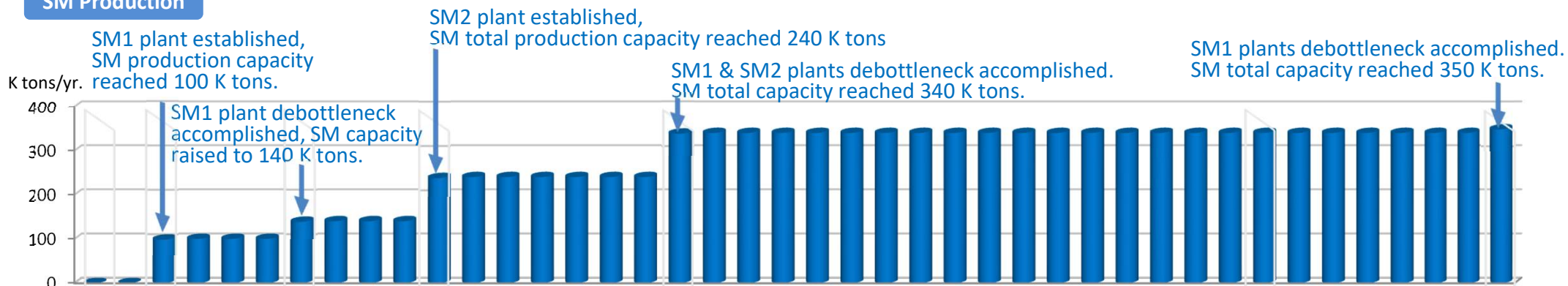
TSMC Clients

The major SM clients are domestic PS, ABS and SBR manufacturers which includes home appliance, mechanical, automobile, electronic and packaging industries. As for PDEB, the clients are chemical plants across the world.

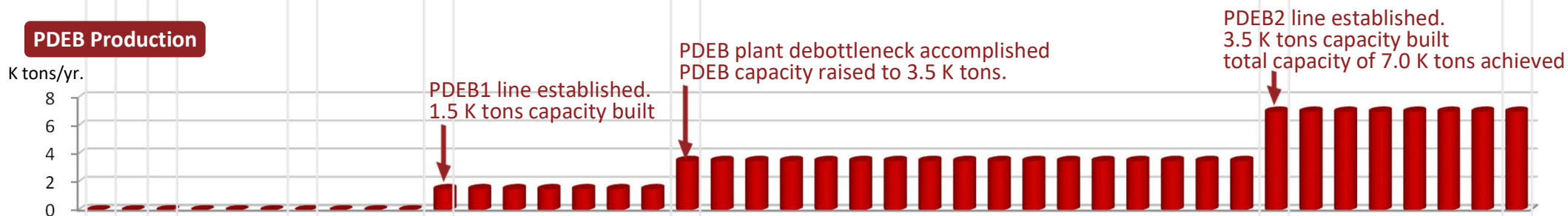


Company and Production History

SM Production



PDEB Production



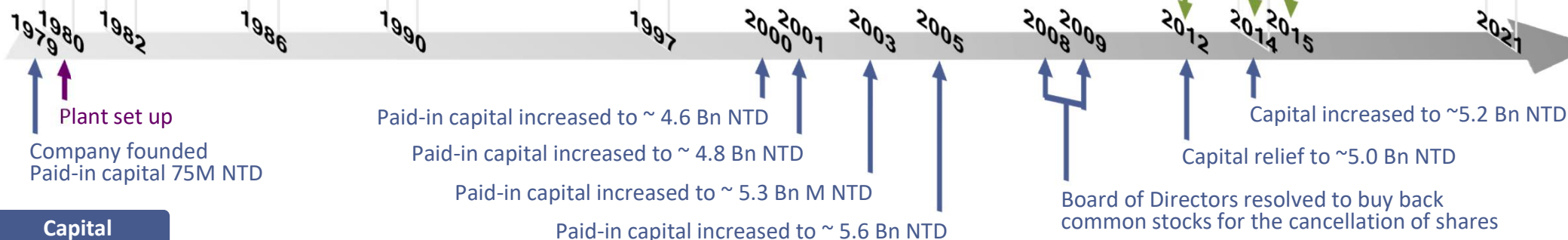
Energy Saving

Basic design for SM1 process improvement accomplished

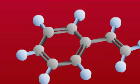
Overall production cost reduction reengineering project accomplished

Multi-function distillation energy-saving projects accomplished

Cogeneration plant in operation



Capital



Quality, Safety and Environment Systems

Since 1995

ISO-9000 Quality Management System implemented in 1995 and certified in Sep. of the same year.

Since 1997

ISO-14001 Environmental Management System implemented and certified in Dec. 1997.

Since 1998

Joined **Taiwan Responsibility Care Association (TRCA)** since 1998 and pledge the health & safety for employees, clients, public and environment.

Since 2009

OHSAS-18001 Occupational Health & Safety Management Systems implemented and certified in Dec. 2009.

Since 2009

CNS-15506 Occupational Health & Safety Management Systems implemented and certified in Dec. 2009.

Since 2014

ISO-14064-1 (CNS 14064-1) Organization Quantification & Reporting of Green House Gases implemented and certified in Jul. 2015.

Since 2017

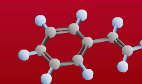
Implementation of **ISO-14001 : Environmental Management Systems** for version change and certified in Jan. 2018.

Since 2018

ISO-9001 (2015) Quality System version change, verification and certified in Sep. 2018.

Since 2020

Conducting audit of OHSAS-18001 to **ISO-45001 system** conversion, and CNS-15506 to **CNS-45001 system** conversion.



Operational Strategy and Strategy Development

Strengthen the core business (SM) and expand the production and sales of specialty chemical (PDEB)

Cost Reduction

- Improvement of raw material and energy utilization efficiency
- Continuous process improvement
- Establishment of a catalyst lab to improve catalyst performance

Reinforcement of Workplace Safety & Environmental Protection

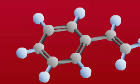
- Fulfill and implement all ISO systems
- Implementation of PSM
- Equipment component management & audit

Subsidiary & Investment Management

- Disposal of unprofitable business oversea.
- Explore & develop investment targets for new strategic and related industries.

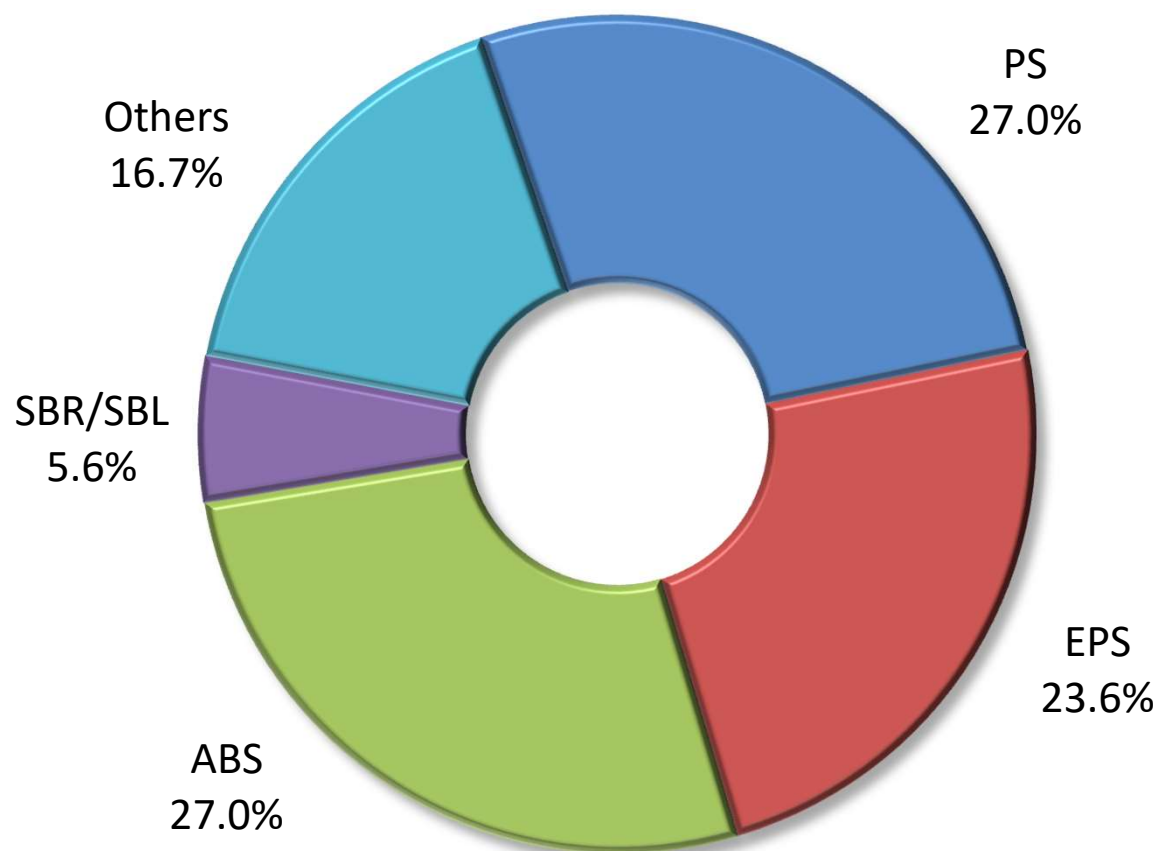
Retrospect and Prospect of SM Market

1. 2020 NE Asia Styrene Demand and Supply
2. Outlook of NE Asia Styrene Demand Growth for 2021~2022
3. Styrene Demand and Supply for Taiwan
4. 2021 First Half Retrospect
5. 2021 Second Half Outlook
6. Overview of Production and Sales for TSMC



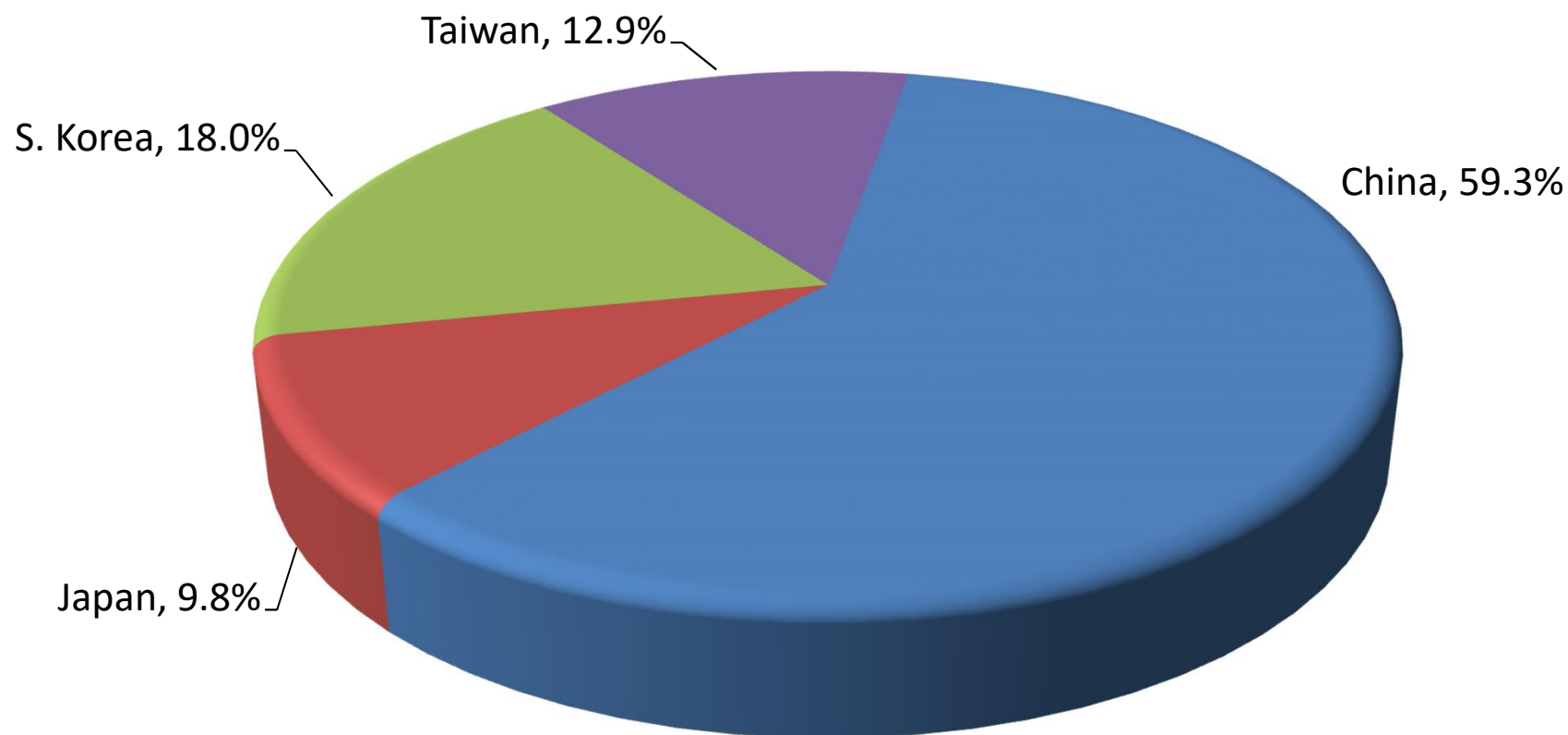
2020 NE Asia SM Supply & Demand

2020 SM Demand by its downstream products in NE Asia

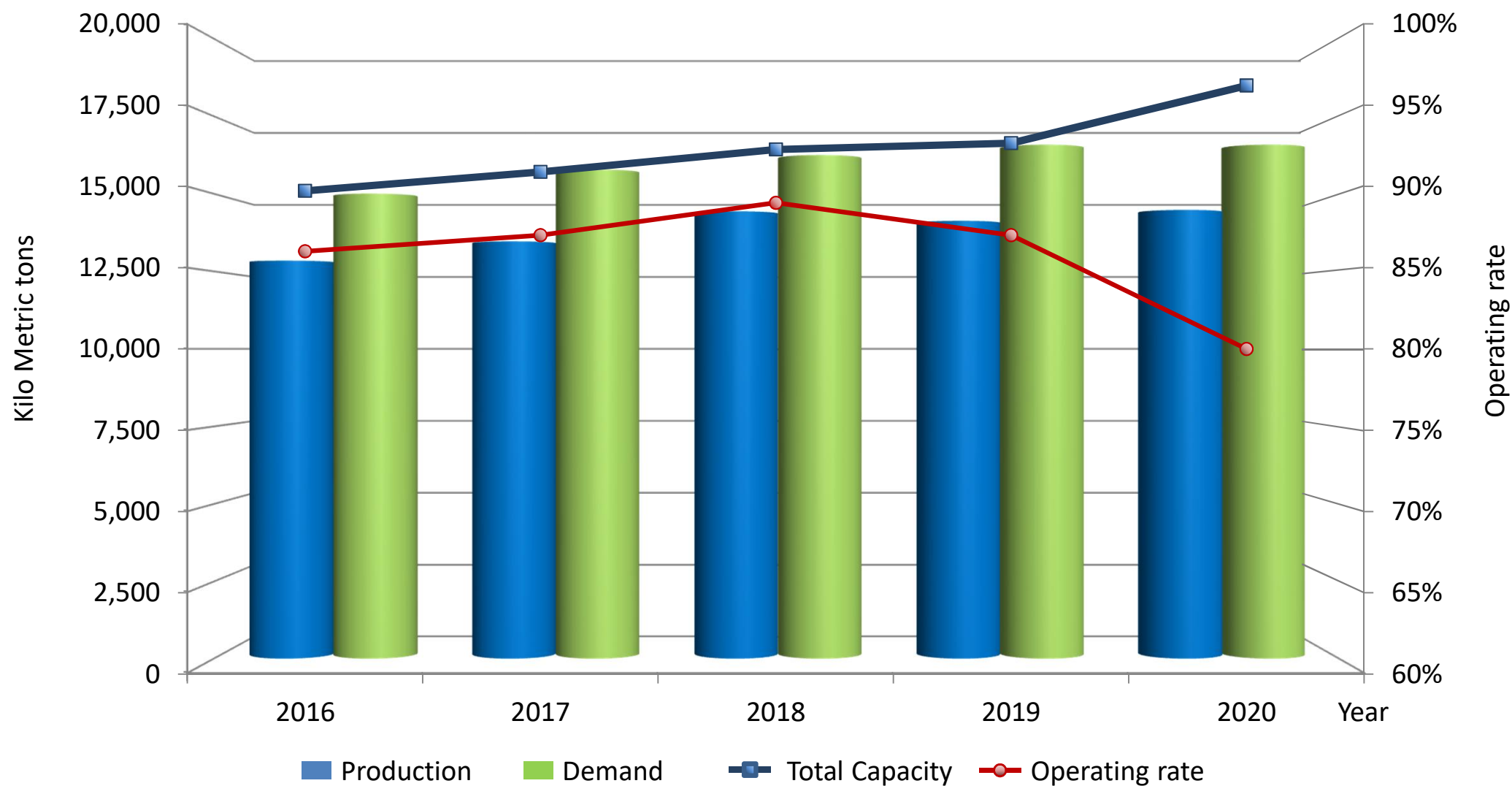


2020 NE Asia SM Supply & Demand

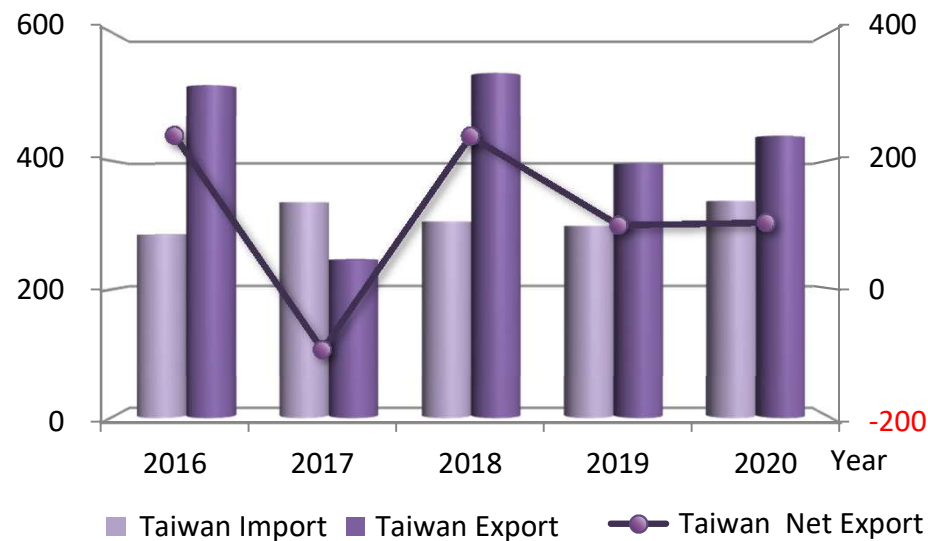
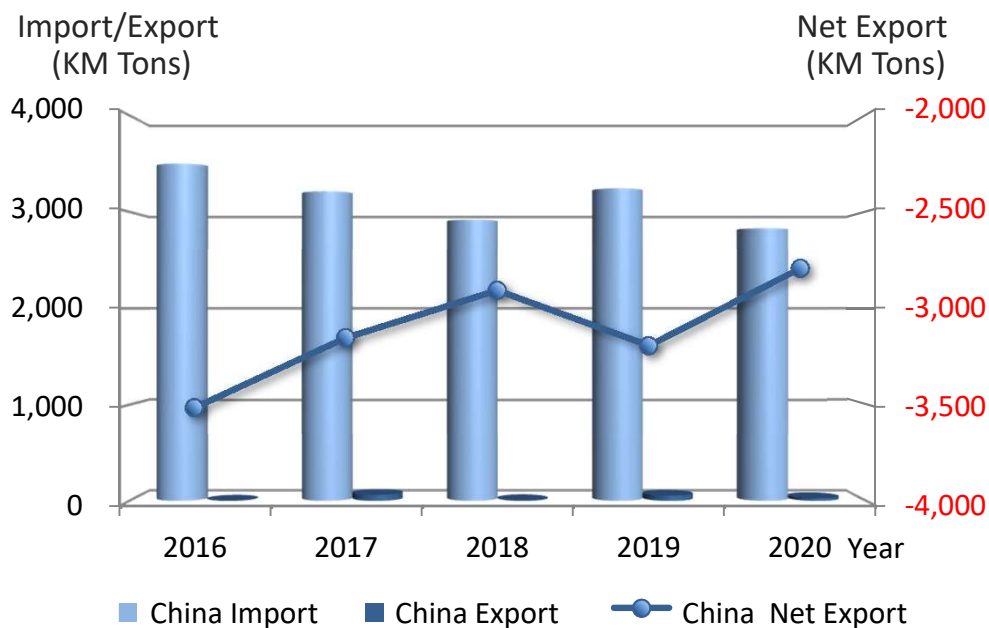
2020 NE Asia SM Demand by Region



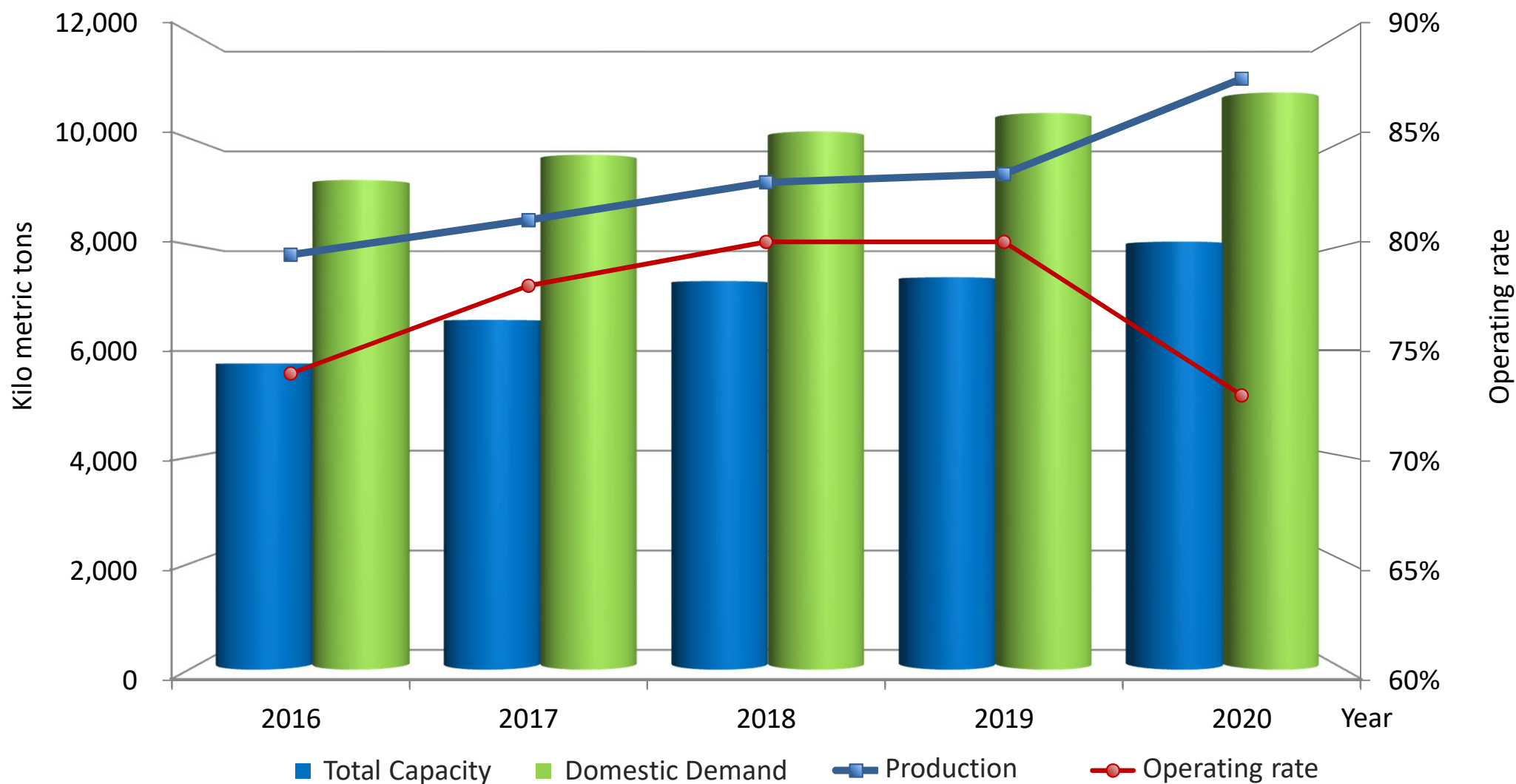
NE Asia SM Supply & Demand



NE Asia SM Net Trade



China SM Supply & Demand



Outlook of NE Asia SM Demand Growth for 2021~2022

- According to IMF's (International Monetary Fund) forecast in July of this year (2021), the global GDP growth rate is 6.0% and 4.9% for year 2021 and 2022 respectively.
- Under the condition described above, the average annual growth rate of NE Asia SM demand would be around 5.0% for year 2021 and 2022.
- The major growth of SM demand is in China. Its average annual growth rate for year 2021 and 2022 would be 6.2%. (China's SM demand growth rate was 3.7% in 2020)

Taiwan SM Supply & Demand

Unit : K Metric Ton

Year	Demand	Production	Net Trade
2011	1,792	1,693	-99
2012	1,822	1,790	-32
2013	1,924	2,044	120
2014	1,795	1,974	179
2015	1,864	2,020	156
2016	1,886	2,118	232
2017	1,913	1,823	-90
2018	1,880	2,110	230
2019	1,894	2,005	112
2020	1,859	1,959	100
Average	1,863	1,954	91

Styrene Demand and Supply for Taiwan Market

- Basically, Taiwan's SM market is net export.
- In 2020, Taiwan's SM production was 1,958,672 tons, demand was 1,893,672 tons and the net export was 101,000 tons.
- In 2020, as the US-China trade war lasted and the worldwide Covid-19 pandemic outbreak, the global economy was seriously impacted again. In July of this year, IMF revised downward year 2020's economic growth rate of global and China to -3.3% and 2.3% respectively.
- As the SM sale accounted for over 94.35% of TSMC's total revenue, the company's operations were also greatly affected. In last year (2020), through maintenance schedule adjustment, flexible repairing arrangement, actively management of production and sales, and with all employees' efforts, the condition of loss in the first half was recovered and improved in the 2nd half. Thus the overall operational performance in 2020 is kept to be profit, with annual after-tax EPS of 0.55.

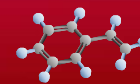
2021 First Half Retrospect

- This year (2021), as US and other rich countries carried out active stimulus spending plans, and vaccination rolled out in many countries, it is expected that the global economy will be resorted and IMF forecasts that the year 2021's global economic growth rate will be 6%. Thus the demand of crude oil greatly recovered, and the price of Brent crude oil hit 70 USD per barrel that surpassed pre-pandemic levels.
- In 2020, SM production capacities were about 35.85 M tons worldwide and 11.85 M tons in China (~33.1% of worldwide capacity). In the 1st half of this year, China's SM capacity has increased 1.95 M tons and reached total capacity to 13.80 M tons that stands for 36.5% of 37.80 M tons global capacity.
- Even the capacity increasing, the demand of SM downstream consumed part of the new capacity. In addition, more than half of the SM plants shut down in US due to ice storm this February and the production restorations have been delayed till this April. In the mean time, many Europe plants had production accidents that led to SM price surge in US and Europe. All this conditions resulted in that China was able to export SM and it relieved the pressure from new plants' oversupply.
- Currently, the SM market is not beneficial and its downstream is profitable, however as described above, SM is still profitable in this 1st half. TSMC's 2021 first half revenue grew 55.74% over the same period of last year, net profit is 489.41 M NTD and after-tax EPS is 0.93.

2021 First Half Retrospect (cont.)

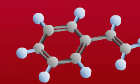
China SM New Production Capacity for 2021

Company	Ann. Capacity (K MT)	Operation Schedule
Anhui Jiayi	350	Jan. 2021
Sinochem Quanzhou	450	Mar. 2021
CNOOC & Shell	630	Mar. 2021
Ningbo Huatai Shengfu	400	May 2021
Sinochem Hongrun	120	Jun. 2021
Gulei	600	Jul. 2021
Zhejiang PC I	80	2021 Q3
Tianjin Bohai Chemical	450	Oct. 2021
Wanhua	650	Oct. 2021
Zhejiang PC II #	600	2021 Q4
Lihuayi	720	2021 YE
Sinopec Maoming PC	420	2021 YE
Luoyang	120	2021 YE
Ningbo ZRCC Lyondell	600	2021 YE
Total	6,190	



2021 Second Half Outlook

- While the global vaccination rate increased, the Covid-19 pandemic has been under controlled and alleviated in the US and Europe. Since this April, pandemic lockdowns have gradually been lifted and SM downstream has restored production. However, new Covid-19 variants have spread around the world.
- Although the Covid-19 variants are still not under effective control, issues that about national security related to US-China trade tension and global warming are still under disputing. Countries worldwide have kept conducting quantitative easing policies and economic stimulus plans, thus it is expected that this year's global economic growth will be better than last one.
- According to petrochemical reports, 6.19 M tons of new SM capacity is estimated to be produced in China this year. There are already 1.95 M tons produced in the 1st half and the rest of the 4.24 M tons are expected to be on production in the 2nd half. After that, China's SM total capacity will reach 18.04 M tons and be about 42.9% of the global capacity.
- From this year on, China's SM market become oversupplied. China will turn to be a SM exporting country and it will change the global SM trading flow.
- With extra 3.5 M tons new capacity next year (2022), China's SM capacity will reach 47.3% of the global capacity then. Thus the future SM market will be much less optimistic as the supply growth increasing greatly but demand growth is still limited.



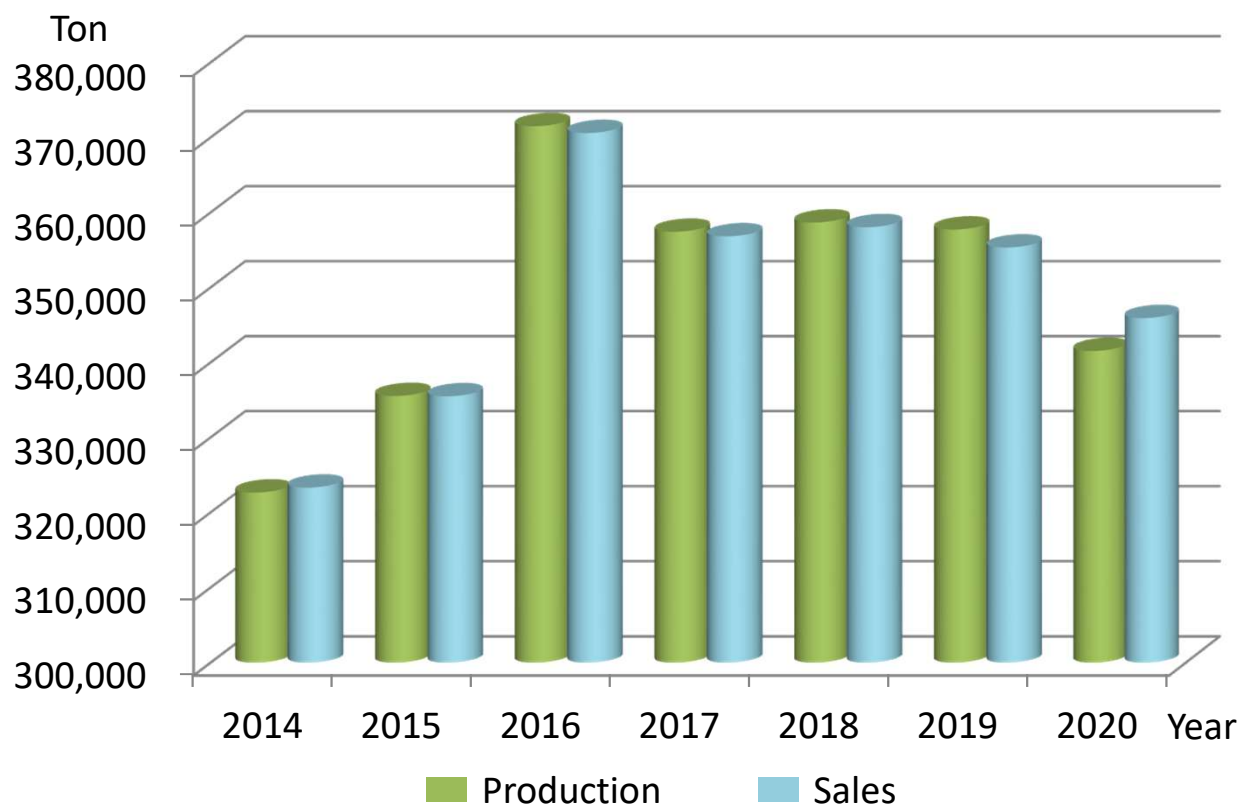
2021 Second Half Outlook (cont.)

China SM New Production Capacity for 2022 ~ 2023

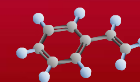
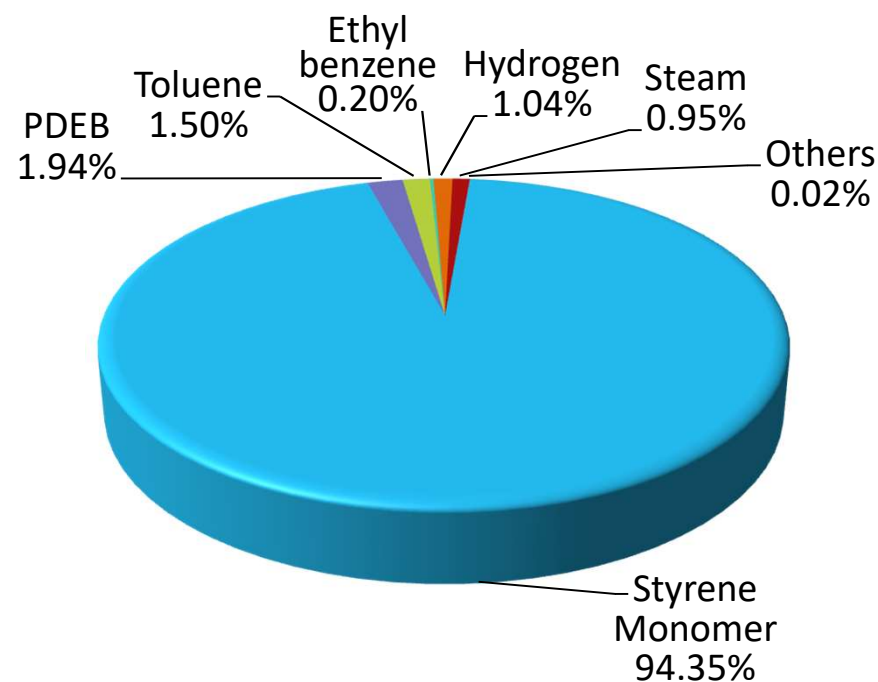
Year	Company	Ann. Capacity (K MT)	Operation Schedule
2022	Baofeng Energy	200	2022 H1
	CNPC Guandong	800	Jun. 2022
	Zhejiang PC II #2	600	2022
	Hengyi PC	620	
	Chambroad	680	
	Satellite	600	
2022 Total		3,500	
2023	Ningbo ZRCC LyondellBasell New Material	600	Apr. 2023
2023 Total		600	
Total of 2022 & 2023		4,100	

Overview of TSMC Production and Sales

2014~2020 SM Production vs Sales Volume



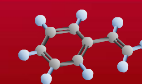
2020 Sales by Products



TSMC Consolidated Income Statement

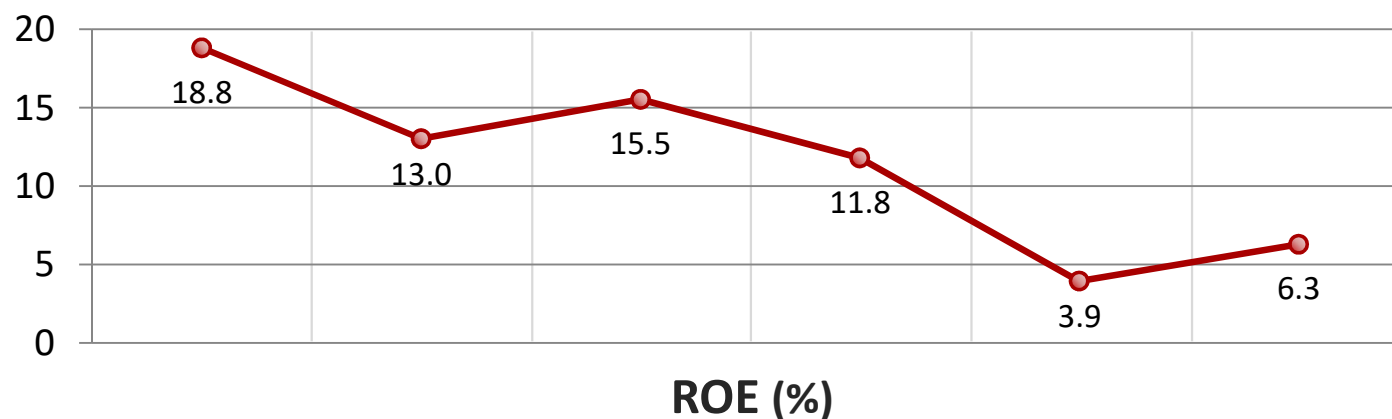
Unit : M NTD

	2019	2020	2021 1Q	2021 2Q
Revenue	12,219	8,113	2,138	3,430
Cost	10,827	7,808	1,850	3,227
Gross profit	1,392	305	287	203
Gross profit rate	11%	4%	13%	6%
Operating expenses	321	215	68	58
Net profit	1,071	90	219	145
Net profit rate	9%	1%	10%	4%
Non-operating income	-36	279	64	33
Profit before tax	1,035	369	284	178
Tax	-153	-80	-42	70
Net profit of the term	882	290	241	248
Profit rate	8%	4%	11%	7%
Net Income Attributed to				
- Stockholders of the company	882	288	239	250
- Non-controlling Interest	-0.3	2.2	2	-2
EPS (NTD)	1.67	0.55	0.45	0.47



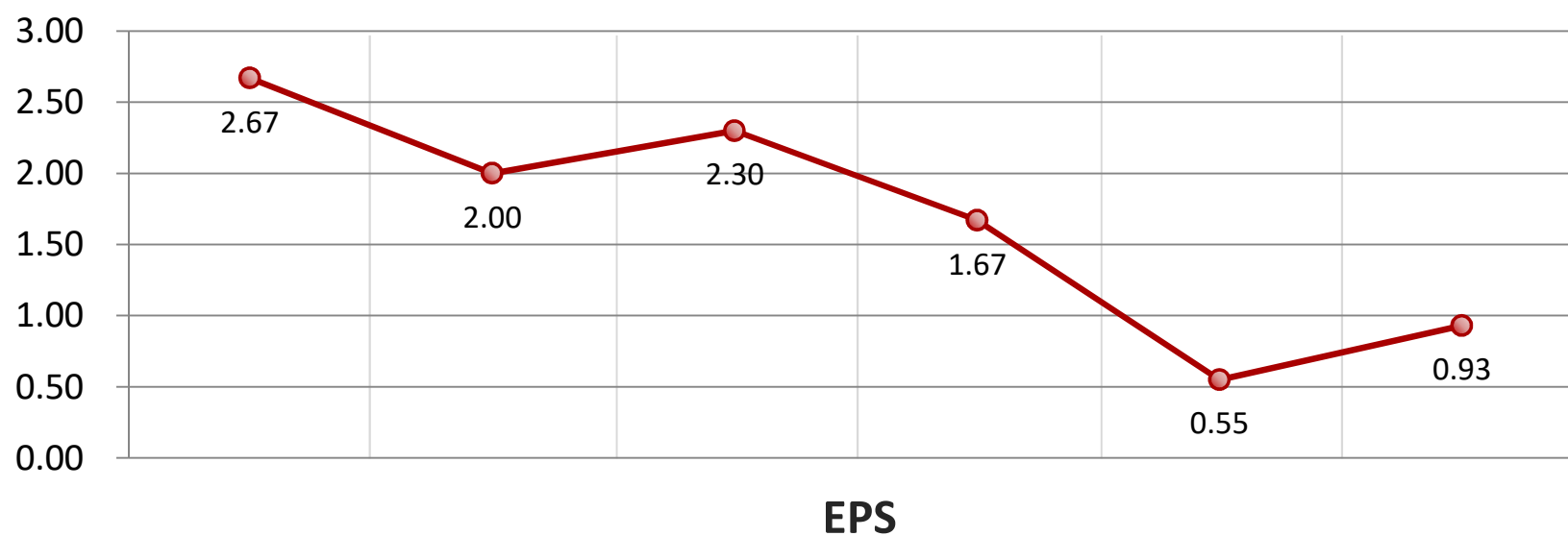
TSMC Consolidated Financial Analysis

	2016	2017	2018	2019	2020	2021 1H
Debts ratio (%)	35.95	30.69	26.57	22.30	17.18	16.92
Current ratio (%)	158.92	176.39	172.55	178.02	203.49	228.34
Quick ratio (%)	112.51	112.99	135.71	140.31	153.51	174.74
Average collection turnover (times)	16.01	12.45	13.48	13.56	9.37	11.27
Average collection days	22.79	29.31	27.08	26.92	38.95	32.40
Average inventory turnover (times)	17.62	21.18	19.35	18.94	18.05	22.14
Average inventory turnover days	20.71	17.23	18.86	19.27	20.22	16.48
Return on total equity (%)	18.8	13.02	15.52	11.80	3.94	6.29

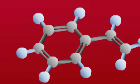


TSMC EPS & Dividend

	2016	2017	2018	2019	2020	2021 1H
EPS (NTD)	2.67	2.00	2.30	1.67	0.55	0.93
Cash dividend (NTD)	2.20	1.60	2.00	1.00	0.50	-
Stock Dividend from Retained Earnings (NTD)	-	-	-	-	-	-



Q & A



Thank You



台灣苯乙烯工業股份有限公司
Taiwan Styrene Monomer Co.