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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended: December 31, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from N/A to N/A

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
Date of event requiring this shell company report

Commission file number 1-13882

TIM S.p.A.

(Exact name of Registrant as specified in its charter)

Italy
(Jurisdiction of incorporation or organization)
Via Gaetano Negri 1, 20123 Milan, Italy
(Address of principal executive offices)

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Head of Administration, Finance and Control
TIM S.p.A.
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(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
American Depositary Shares, each representing 10 Ordinary Shares (the "**Ordinary Share ADSs**")	The New York Stock Exchange
Ordinary Shares (the "**Ordinary Shares**")	The New York Stock Exchange*
American Depositary Shares, each representing 10 Savings Shares (the "**Savings Share ADSs**")	The New York Stock Exchange
Savings Shares (the "**Savings Shares**")	The New York Stock Exchange*
Guarantee of Guaranteed Senior Notes due 2018 of Telecom Italia Capital	The New York Stock Exchange**
Guarantee of Guaranteed Senior Notes due 2019 of Telecom Italia Capital	The New York Stock Exchange**
Guarantee of Guaranteed Senior Notes due 2033 of Telecom Italia Capital	The New York Stock Exchange**
Guarantee of Guaranteed Senior Notes due 2034 of Telecom Italia Capital	The New York Stock Exchange**
Guarantee of Guaranteed Senior Notes due 2036 of Telecom Italia Capital	The New York Stock Exchange**
Guarantee of Guaranteed Senior Notes due 2038 of Telecom Italia Capital	The New York Stock Exchange**

Securities registered or to be registered pursuant to Section 12(g) of the Act:
None

(Title of Class)
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:
None

(Title of Class)
Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.
Ordinary Shares 15,203,122,583
Savings Shares 6,027,791,699

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act Yes ☒ No ☐
If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒
Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer", "accelerated filer", and "emerging growth company" in Rule 12b-2 of the Exchange Act.
Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Emerging growth company ☐
If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standardst provided pursuant to Section 13(a) of the Exchange Act. ☐
The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.
Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:
U.S. GAAP ☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☒ Other ☐
If "Other" has been checked in response to the previous question indicate by check mark which financial statement item the registrant has elected to follow Item 17 ☐ Item 18 ☐
If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

* Not for trading, but only in connection with the registration of American Depositary Shares representing such Ordinary Shares or Savings Shares, as the case may be, pursuant to the requirements of the Securities and Exchange Commission.
** Not for trading, but only in connection with the registration of the corresponding Guaranteed Senior Notes of Telecom Italia Capital (a wholly-owned subsidiary of TIM S.p.A.).

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INTRODUCTION

Telecom Italia S.p.A., named also "TIM S.p.A.", is incorporated as a joint stock company under the laws of Italy. As used in this Annual Report, unless the context otherwise requires, the term "Company" means TIM S.p.A. the operating company for fixed and mobile telecommunications services in Italy and the holding company of the Tim Group that is engaged principally in the communications sector and, particularly, the fixed and mobile national and international telecommunications sector.

The terms "we", "us" and "our" refers to the Company, and, as applicable, the Company and its consolidated subsidiaries.

Unless otherwise indicated, the financial information contained in this Annual Report has been prepared in accordance with International Financial Reporting Standards issued by the International Accounting Standards Board (designated as "**IFRS**").

Unless otherwise indicated, any reference in this Annual Report to Consolidated Financial Statements is to the Consolidated Financial Statements for the year ended December 31, 2018 of the TIM Group (including the notes thereto) included elsewhere herein.

References herein to TIM websites are textual references only and information on or accessible through such websites does not form part of and is not incorporated into this Form 20-F.

Cautionary Statement for Purposes of the "Safe Harbor" Provisions of the United States Private Securities Litigation Reform Act of 1995.

The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for forward-looking statements. This Annual Report contains certain forward-looking statements.

Forward-looking statements are statements that are not historical facts and can be identified by the use of forward-looking terminology such as "believes," "may," "is expected to," "will," "will continue," "should," "seeks" or "anticipates" or similar expressions or the negative thereof or other comparable terminology, or by the forward-looking nature of discussions of strategy, plans or intentions.

The forward-looking statements in this Annual Report include, but are not limited to, the discussion of the changing dynamics of the telecommunications marketplace, including the continuing developments in competition in all aspects of our businesses from new competitors and from new and enhanced technologies, our outlook for growth in the telecommunications industry both within and outside of Italy, including our outlook regarding developments in the telecommunications industry, and certain trends we have identified in our core markets, including regulatory developments.

Such statements include, but are not limited to, statements under the following headings: (i) "Item 3. Key Information—3.1 Risk Factors", (ii) "Item 4. Information on the TIM Group—4.1 Business—4.1.7 Updated Strategy", (iii) "Item 4. Information on the TIM Group—4.3 Regulation", (iv) "Item 5. Operating and Financial Review and Prospects", (v) "Item 8. Financial Information—8.2 Legal Proceedings" and (vi) "Item 11. Quantitative and Qualitative Disclosures About Market Risks", including statements regarding the likely effect of matters discussed therein.

Actual results may differ materially from those projected or implied in the forward-looking statements. Such forward-looking information is based on certain key assumptions which we believe to be reasonable but forward-looking information by its nature involves risks and uncertainties, which are outside our control, that could significantly affect expected results.

The following important factors could cause actual results to differ materially from those projected or implied in any forward-looking statements:

- our ability to successfully implement our strategy in the future;
- a deterioration of the economic environment in the principal markets in which we operate, including, in particular, our core Italian market;
- the impact of regulatory decisions and changes in the regulatory environment in Italy, Brazil and other countries in which we operate, including the ability of the Italian Government to exercise its power with respect to our ability to enter into strategic transactions;

- our ability to successfully compete on both price and innovation capabilities with respect to new products and services;
- our ability to develop and introduce new technologies that are attractive in our principal markets, to manage innovation, to supply value added services and to increase the use of our fixed and mobile networks;
- our ability to successfully implement our internet and broadband/ultrabroadband strategy;
- our ability to successfully achieve our financial targets (including debt reduction);
- the impact of fluctuations in currency exchange and interest rates and the performance of the equity markets in general;
- the outcome of litigation, disputes and investigations in which we are involved or may become involved;
- our ability to build up our business in adjacent markets and in international markets (particularly in Brazil), due to our specialist and technical resources;
- our ability to achieve the expected return on the investments and capital expenditures we have made and continue to make in Italy, Brazil and other countries in which we operate;
- the amount and timing of any future impairment charges for our authorizations, goodwill or other assets;
- our ability to manage any business or operating model transformation plans;
- disruptions or uncertainties resulting from the United Kingdom's expected exit from the European Union;
- any difficulties which we may encounter in our supply and procurement processes, including as a result of the insolvency or financial weaknesses of our suppliers; and
- the costs we may incur due to unexpected events, in particular where our insurance is not sufficient to cover such costs.

The foregoing factors should not be construed as exhaustive. Due to such uncertainties and risks, readers are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date hereof. We undertake no obligation to release publicly the result of any revisions to these forward-looking statements which may be made to reflect events or circumstances after the date hereof, including, without limitation, changes in our business or acquisition strategy or planned capital expenditures, or to reflect the occurrence of unanticipated events.

KEY DEFINITIONS

The following terms appearing in this Annual Report have the meanings set forth below.

EU	means the European Union.
IASB	means the International Accounting Standards Board.
IFRS	means International Financial Reporting Standards issued by the IASB. IFRS also include all effective International Accounting Standards ("**IAS**") and all Interpretations issued by the IFRS Interpretations committee (formerly called International Financial Reporting Interpretations Committee—IFRIC), comprising those previously issued by the Standing Interpretations Committee ("**SIC**").
Ordinary Shares	means the Ordinary Shares, of TIM.
Parent, Telecom Italia, TIM and Company	means Telecom Italia S.p.A., also named TIM S.p.A.
Savings Shares	means the Savings Shares, of TIM.
TIM Group and Group	means the Company and its consolidated subsidiaries.
Vivendi	means the Vivendi S.A. a limited liability company (*société anonyme*) incorporated under French law and subject to French commercial company law including the French commercial Code (*Code de commerce*). Vivendi S.A. is an integrated content and media group. The company operates businesses throughout the media value chain, from talent discovery to the creation, production and distribution of content. For such key definition see also below.

* * *

On May 16, 2018, the Board of Directors of TIM S.p.A. acknowledged that the grounds, under Italian law, for considering Vivendi the entity exercising direction and coordination powers over TIM no longer applied. Subsequently, on June 25, 2018, the Board of Directors approved amendments to the internal procedure governing transactions with related parties, and updated the relative related party boundary to reflect the new situation, whereby Vivendi no longer qualifies as the *de facto* controlling entity over TIM.

For further details, please see "Item 7. Major Shareholders And Related-Party Transactions".

* * *

In addition to the foregoing terms, certain technical telecommunication terms relating to our businesses are defined in the glossary of this Annual Report (see "Item 4. Information on the TIM Group—4.5 Glossary of Selected Telecommunications Terms").

In addition, we use the measure "Accesses" when considering certain statistical and other data for our domestic Italian business. "Access" refers to a connection to any of the telecommunications services offered by the Group in Italy. The following are the main categories of accesses:

- **Physical Accesses:** in the domestic fixed telephony business, includes retail accesses, as well as wholesale accesses directly managed by TIM, excluding OLOs, for which infrastructure is fully developed, and FWA-Fixed Wireless Accesses;
- **Broadband Accesses:** in the domestic fixed telephony business, includes broadband retail accesses and broadband wholesale accesses directly managed by TIM and excludes OLO LLU and NAKED, satellite, full-infrastructured and FWA—Fixed Wireless Accesses. Broadband retail accesses are included as part of physical accesses;
- **Mobile accesses:** number of lines.

PART I

Item 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not Applicable

Item 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not Applicable

Item 3. KEY INFORMATION

3.1 RISK FACTORS

In addition to the other information contained in this Annual Report, investors should carefully consider the risks described below before making any investment decision. The risks described below are not the only ones we face. Additional risks not known to us or that we currently deem immaterial may also impact our business and results of operations. Our business, financial condition, results of operations and cash flows could be materially adversely affected by any of these risks, and investors could lose all or part of their investment.

We present below:

1) our main objectives as set out in our 2019-2021 Strategic Plan (the "**2019-2021 Plan**" or the "**Plan**"); and
2) factors that may prevent us from achieving our objectives. For purposes of presenting our risk factors we have identified our risks based on the main risk categories, set out in the Committee of Sponsoring Organization of the Treadway Commission[1]:
   - strategic risks;
   - operational risks;
   - financial risks; and
   - compliance risks.

Our business will be adversely affected if we are unable to successfully implement our strategic objectives. Factors beyond our control may prevent us from successfully implementing our strategy.

On February 21, 2019, TIM's Board of Directors approved the 2019–2021 Strategic Plan (the "**Plan**"). The Plan focuses on improving TIM's execution and timely delivery of what planned as a key element for the organic transformation of TIM. The Plan provides to re-start from TIM real competitive advantages (network quality, scale and client proximity, technical competences and geographical presence) to guarantee industrial sustainability. On the Technological front, the Plan sets modernization, simplification and artificial intelligence at the core of future investments in order to ensure quality excellence and contain capital expenditures intensity. Quality and reliability on all customer touch points (activation, delivery and problem resolution) are as well at the center of the strategy. These strategic actions will allow to deliver a sustainable return on capital invested, to optimize invested capital and finally to delever the business.

Our ability to implement and achieve our strategic objectives and priorities may be influenced by certain factors, including factors outside of our control. Such factors include:

- a deterioration of the economic environment in the principal markets in which we operate, including, in particular, our core Italian market;
- the impact of regulatory decisions and changes in the regulatory environment in Italy, Brazil and other countries in which we operate, including the ability of the Italian Government to exercise its power with respect to our ability to enter into strategic transactions;
- our ability to successfully compete on both price and innovation capabilities with respect to new products and services;
- our ability to develop and introduce new technologies that are attractive in our principal markets, to manage innovation, to supply value added services and to increase the use of our fixed and mobile networks;
- our ability to successfully implement our internet and broadband/ultrabroadband strategy;
- our ability to successfully achieve our financial targets (including debt reduction);
- the impact of fluctuations in currency exchange and interest rates and the performance of the equity markets in general;
- the outcome of litigation, disputes and investigations in which we are involved or may become involved;
- our ability to build up our business in adjacent markets and in international markets (particularly in Brazil), due to our specialist and technical resources;

[1] CoSO Report-ERM Integrated Framework 2004.

- our ability to achieve the expected return on the investments and capital expenditures we have made and continue to make in Italy, Brazil and other countries in which we operate;
- the amount and timing of any future impairment charges for our authorizations, goodwill or other assets;
- our ability to manage any business or operating model transformation plans;
- disruptions or uncertainties resulting from the United Kingdom's expected exit from the European Union;
- any difficulties which we may encounter in our supply and procurement processes, including as a result of the insolvency or financial weaknesses of our suppliers; and
- the costs we incur due to unexpected events, in particular where our insurance is not sufficient to cover such costs.

As a result of these uncertainties there can be no assurance that the business and strategic objectives identified by our management can effectively be attained in the manner and within the time-frames described. Furthermore, if we are unable to attain our strategic priorities, our goodwill may be further impaired, which could result in further significant write-offs.

The following sets out more specific factors that may prevent us from achieving our objectives.

STRATEGIC RISKS

Weak global economic conditions, including the continuing weakness of the Italian economy and political conditions in Brazil, have adversely affected our business in recent years. After the economic recovery of 2017, the Eurozone economy has shifted from a recovery boom to an unexpected slower cruising speed. Economic conditions in the Italian economy have shown improvement, however, strong uncertainty persist with respect to the economic outlook, which could have a negative impact on our operating results and financial condition.

Our business is dependent on general economic conditions in Italy and in our other principal market, Brazil, including with respect interest rate levels, inflation, taxation and general business conditions. The weak economic conditions of the last several years have had an adverse impact on our business and result of operation.

The prolonged economic recession that Italy has experienced in recent years has negatively impacted development prospects in our core Italian market.

After the recovery of 2017 with an economic growth of 1.6%, Italy is experiencing a slowdown even stronger than the other EMU member countries: GDP in 2018 grew by 0.9% in real terms and for 2019 an even more modest growth is expected. The slowdown in Italian growth reflects the deceleration of exports (particularly towards the main trading partner, Germany, which in turn has recorded a sharp slowdown in the third quarter) and the expected normalization of monetary policies. On the domestic side, the uncertainty associated with fiscal policy interventions and the possible repercussions on financial markets and the deteriorating of consumer and business confidence weigh significantly.

During 2018, Brazilian economy presented a lower growth than previously expected, with the GDP growth of 1.1%, according to the Brazilian Institute of Geography and Statistics ("**IBGE**"), when compared to a previous growth projection of 2.8%, at the end of 2017. This result was directly impacted by political instability due to the presidential election, that led to a historical high of the dollar exchange rate in reais (R$4.19), which, amid other factors, such as the oil price fluctuation in the international market, contributed to a strong growth of the fuel prices, one of the main factors for the 10 days truckers strike, that also contributed directly for the deceleration of Brazilian growth.

Despite that, the inflation, measured by the IPCA continued under control, at 3.75% below the minimum target set by Central Bank, but with a slight growth when compared to 2017 (2.95%). Unemployment has decreased; however, consumer and business confidence still remain sensitive to the new government's ability to approve relevant reforms to fiscal adjustment.

Vivendi is our largest shareholder and exercises substantial influence over us.

As of the date hereof, the largest single shareholder in the Company is Vivendi S.A. ("**Vivendi**"), which holds, directly, a stake of approximately 23.94% of ordinary share capital. With a holding of this size, Vivendi can exercise significant influence over matters subject to a vote of the ordinary shareholders of the Company, such as nominations to the Board of Directors (the "**Board**"), matters involving mergers or other business combinations, the acquisition or disposition of assets, issuances of equity and the incurrence of indebtedness. In addition, Vivendi's significant holding may also have the effect of discouraging others from making tender offers for our shares. See "Item 7. Major Shareholders and Related-Party Transactions—7.1 Major Shareholders".

Competition Risks

Alternative infrastructure operators in Italy could pose a threat to us, particularly in the medium to long term

In the fixed market, alternative network operators ("**AltNet**"), such as Open Fiber S.p.A. (Open Fiber) and Infratel Italia S.p.A. (Infratel), have disclosed and started to implement plans to develop alternative ultrabroadband telecommunications networks in Italy in the main Italian cities and in so-called "market failure" areas. Similar alternative developments, either on a standalone basis or through partnerships with other licenced operarators ("**OLOs"**), could adversely impact our businesses, assets and goodwill and, as a consequence, our economic and financial performance. In particular, we face risks with respect to increasing competition in the National Wholesale Market, which could result in losses with respect to our customer base and revenues and a potential loss of retail market share and revenues.

Strong competition in Italy or other countries where we operate may further reduce our core market share for telecommunications services and may cause reductions in prices and margins thereby having a material adverse effect on our results of operations and financial condition.

Telecommunications operators have generally faced challenging market conditions in recent years, principally as a result of the decline in voice traffic and significant pricing pressures resulting from increased competition among operators.

Strong competition exists in all principal areas of the Italian telecommunications business in which we operate. Competition may become even more acute in the coming years, with additional international operators accessing the Italian market.

The Italian telecommunications market is experiencing a phase of heating of the competitive environment, mainly due to the entry of Iliad in the mobile market as the 4th network infrastructured operator. Iliad launched its mobile service in the Italian market at the end of May 2018 and has rapidly gained customers and consequently market share to the detriment of the other infrastructured operators, thanks to a simplified offer particularly aggressive in terms of price and volume of data. The other operators followed Iliad reducing prices and largely increasing GB allowance with an impact not only on the mobile sector with the explosion of overall MNP exchange and ARPU dilution, but also on the fixed, generating a price war to recover customer base lost on Mobile.

Moreover, convergence has enabled lateral competition from Information Technology (or IT), over-the-top ("**OTT**"), Media and Devices/Consumer Electronic players. This competition may further increase due to globalization and the consolidation of the telecommunications industry in Europe, including Italy, and elsewhere.

The emergence of alternative infrastructure operators could also pose a threat to us, particularly in the medium to long term.

Competition in our principal lines of business has led, and could lead, to:

- price and margin erosion for our traditional products and services;
- loss of market share in our core markets;
- loss of existing or prospective customers; and
- greater difficulty in retaining existing customers.

In addition, competition with respect to innovative products and services in our Italian domestic fixed-line, mobile telephony and broadband/ultrabroadband businesses, has led, and could lead to:

- obsolescence of existing technologies and more rapid deployment of new technologies;
- an increase in costs and payback period related to investments in new technologies that are necessary to retain customers and market share; and
- difficulties in reducing debt and funding strategic and technological investments if we cannot generate sufficient profits and cash flows.

Although we continue to take steps to realize additional efficiencies and to rebalance our revenue mix through the continuous introduction of innovative and value-added services, if any or all of the events described above occur, the impact of such factors could have a material adverse effect on our results of operations and financial condition.

Continuing rapid changes in technologies could increase competition, reduce usage of traditional services and require us to make substantial additional investments.

We, like other operators, face increasing competition from non-traditional data services on new voice and messaging over-the-internet technologies, in particular OTT applications such as Skype, FaceTime, Messenger and WhatsApp. These applications are often free of charge, other than charges for data usage and are accessible via smartphones, tablets and computers. These applications provide users with potentially unlimited access to messaging and voice services over the internet, bypassing more expensive traditional voice and messaging services, such as SMS, which have historically been a source of significant revenues for fixed and mobile network operators like TIM. In Italy and Brazil, an increasing number of customers are using OTT applications services instead of traditional voice and SMS communications.

Historically, we have generated a substantial portion of our revenues from voice and SMS services, particularly in our mobile business in Italy, and the substitution of data services for these traditional voice and SMS volumes has had and could continue to have a negative impact on our revenues and profitability.

If non-traditional voice and messaging data services continue to increase in popularity, as they are expected to, and we are unable to address such competition, our average revenue per user ("**ARPU**") could decline and we would face lower margins across many of our products and services, resulting in a material adverse effect on our business, results of operations, financial condition and prospects.

We may be adversely affected if we fail to successfully implement our Internet and broadband/fiber/ 4.5G/5G NGNM strategy.

The continuing development of Internet and broadband/fiber services constitutes a strategic objective for us. We aim to increase the use of our networks in Italy and abroad to offset the continuing decline of traditional voice services. Our ability to successfully implement this strategy may be negatively affected if:

- broadband/fiber mobile coverage does not grow as we expect;
- competition grows to include players from adjacent markets or technological developments introducing new platforms for Internet access and/or Internet distribution;
- we are unable to provide superior broadband/fiber connections and broadband/mobile services relative to our competitors;
- we experience network interruptions or related capacity problems with network infrastructure; and
- we are unable to obtain adequate returns from the investments related to our network development.

However, implementation of 4.5G/5G ultrabroadband mobile technologies is dependent on a number of factors including the following:

- availability and selection of cutting edge technology from our network/platforms and device vendors.

If we fail to achieve our objectives for the implementation of ultrabroadband mobile coverage in a timely manner, or at all, we may lose market share to our competitors in this strategically important segment.

Any of the above factors may adversely affect the successful implementation of our strategy, our business and results of operations.

Our business may be adversely affected if we fail to successfully implement our Information and Communications Technology (ICT) strategy.

We intend to continue focusing on Information Technology-Telecommunication ("**IT-TLC**") convergence by addressing the ICT market, offering network and infrastructure management, as well as application management. In particular, as the market for cloud services continues to grow, the ICT market is expected to become a key element of our strategy.

We expect increasing competition in this market as additional competitors (mainly from telecommunications operators, through the acquisition of and partnerships with IT operators) also enter this market. If we fail to grow our market share or compete effectively, our revenues could be negatively affected.

Our business may be adversely affected if we fail to successfully implement our "next-generation networks" strategy.

One of our goals is to accelerate the roll-out of a new telecommunications network capable of providing customers with ultrabroadband connections, generally referred to as a next-generation network ("**NGN**").

However, implementation of ultrabroadband technologies is dependent on a number of factors including:

- delays in receiving the necessary permissions and authorizations for installation of NGN lines;
- resistance by road administrators to the use of innovative techniques for excavation and the laying fiber optic cables;
- delay in the operation of SINFI (Sistema Informativo Nazionale Federato delle Infrastrutture).

In areas not provided for under our development plan or where implementation of the ultrabroadband plan is conditioned upon the grant of public funds, in addition to those listed above, the following factors should be considered:

- allocation of public funds at the local level;
- fulfillment of technical and economic conditions related to the EuroSUD (a European funding telematic counter) tenders awarded to us; and
- the awarding of tenders for the grant of public funds, which unduly penalize TIM by setting wholesale prices considerably lower than the regulated prices applicable to TIM's similar services which are set in its Reference Offer as approved by AGCom.

If we fail to achieve our objectives for the implementation of ultrabroadband coverage in a timely manner, or at all, we may lose market share to our competitors in this strategically important segment, which may adversely impact our business, financial condition and results of operations.

We are subject to risks associated with political developments in countries where we operate

Changes in political conditions in Italy and in other countries where we have made significant investments (particularly in countries where the political situation is less predictable than in Western Europe) may have an adverse effect upon our business, financial condition, results of operations and cash flows.

The Italian government has exercised, and may in the future exercise, its significant powers with respect to us, including with respect to our ability to enter into strategic transactions

In 2012, regulations relating to the special powers regarding strategic assets in the energy, transport and communications sectors were published and became effective (Law Decree n. 21 of March 15, 2012, adopted with modifications by Law n. 56 of May 11, 2012: the "Golden Power Decree").

Article 1 of the Golden Power Decree (which refers to assets strategic for the defense and national security sector) grants the Italian Government:

- the power to impose conditions and possibly to oppose the purchase of shareholdings by parties other than the Italian State, Italian public entities and other parties controlled by the same, so long as the stake is sufficient to compromise the interests of national defence and security. Until expiry of the period of time within which conditions may be imposed, or the power to oppose the acquisition exercised, any rights other than ownership rights connected to the relevant shares are suspended. Such rights are suspended in case of non-compliance with or breach of any condition imposed on the purchaser, for as long as the non-compliance or breach persists. Any shareholders' resolution adopted with the relevant shares providing the decisive votes, as well as any resolution or act adopted that breaches or does not comply with any condition imposed, is null and void;
- veto power (including through the imposition of obligations or conditions) regarding any resolution (by either the shareholders' meeting or the administrative bodies of the company) on any merger, demerger, transfer of business unit, relocation of registered office to outside Italy, change of the corporate purpose or winding up of the company. Any resolution or act adopted in breach of these obligations is null and void. The Government may also order the Company and any other party to restore the original condition.

Article 2 of the Golden Power Decree (which refers to strategic assets in the communications sector) grants the Italian Government:

- the power to impose conditions and possibly oppose the purchase, under certain conditions, by non-EU entities, of controlling stakes in companies that hold the aforementioned types of assets. Until the end of a 15-day period from the notice of such purchase, during which the Government may impose conditions or oppose the proposed purchase, voting rights (and any rights other than the property rights) connected to shares resulting in the change of control, are suspended. Such rights are suspended in the case of any non-compliance with or breach of the conditions imposed on the purchaser for as long as the non-compliance or breach persists. Any shareholders' resolution adopted with the relevant shares providing the decisive votes, as well as any resolution or act adopted that breaches or does not comply with any condition imposed, is null and void;
- veto power (including through the imposition of obligations or conditions) regarding any resolution, act or transaction that has the effect of modifying the ownership, control or availability of such strategic assets or changing their location, including resolutions on any merger, demerger, transfer of registered office to outside Italy, transfer of the company or a business unit which contains the strategic assets, or their assignment by way of guarantee. Any resolution or act in breach of such obligations is null and void. The Government may also order the company and any other party to restore the original condition at its own expense.

In October and November 2017, the Government designated certain of the Company's assets as strategic within the meaning of the above-described provisions of the Golden Power Decree and imposed various governance and organizational obligations and restrictions on the Company. This and any future exercise of the Government's powers under the Golden Power Decree, or the mere existence of such powers, could:

- adversely affect the Company's ability to conduct its business (including, for example, by limiting the Company's ability to dispose of assets designated as strategic); and
- make a change of control transaction with respect to TIM (whether by merger or otherwise) more difficult to achieve, if at all, or discourage bidders from making an offer relating to a change of control that could otherwise be beneficial to shareholders.

OPERATIONAL RISKS

We face numerous risks with respect to the efficiency and effectiveness of resource allocation. Operational risks related to our business, include those resulting from inadequate internal and external processes, fraud, employee errors, failure to document transactions properly, loss or disclosure of critical or commercial sensitive data or personal identification information and systems failures. These events could result in direct or indirect losses and adverse legal and regulatory proceedings, and could harm our reputation and operational effectiveness.

We have in place risk management procedures designed to detect, manage and monitor at a senior level the evolution of these operational risks. However, there is no guarantee that these measures will be successful in effectively controlling the operational risks that we face and such failures could have a material adverse effect on our results of operations and could harm our reputation.

System and network failures could result in reduced user traffic and reduced revenue and could harm our reputation. In addition, our operations and reputation could be materially negatively affected by cyber-security threats or our failure to comply with new data protection legislation UE 2016/679 General Data Protection Regulation (GDPR), of which implementation was mandatory by May 25, 2018.

We have executed a deep gap analysis, identified the main issues, and consequently planned and deployed a master plan to reach a full compliance with new General Data Protection Regulation 2016/679/EU (GDPR) requirements, facilitated by the strength of present data protection operative model adopted by the Company. However, deficiencies in full adoption of data security measures, implementing personal data processing and retention requirements and reporting data measures within a narrow mandatory timeframe could lead to disputes with data protection authorities, fines or harm to our reputation.

Our success largely depends on the continued and uninterrupted performance of our IT, network systems and of certain hardware and datacenters that we manage for our clients. Our technical infrastructure (including our network infrastructure for fixed-line and mobile telecommunications services) is vulnerable to damage or interruption from technology failures, power loss, floods, windstorms, fires, terrorism, intentional wrongdoing, human error and similar events. Unanticipated problems at our facilities, system failures, hardware and software failures, computer viruses and hacker attacks, as well as terrorist attacks against our infrastructure, which remains a target, could affect the quality of our services and cause service interruptions. Any of these occurrences could result in reduced user traffic and reduced revenue and could negatively affect our levels of customer satisfaction, reduce our customer base and harm our reputation. In addition, our operations involve daily processing and storage of large amounts of customer data and require uninterrupted, accurate, permanently available, real-time and safe transmission and storage of customer and other data in compliance with applicable laws and regulations. The proper functioning of, including prevention of unauthorized access to, our networks, systems, computers, applications and data, such as customer accounting, network control, data hosting, cloud computing and other information technology systems is critical to our operations. We may be held liable for the loss, release, disclosure or inappropriate modification of the customer data stored on our equipment or carried by our networks. IT system failure, interruption of service availability, industrial espionage, cyber-attack or data leakage, in particular relating to customer data, could seriously limit our ability to service our clients, result in significant compensation costs for which indemnification or insurance coverage may be only partially available, result in a breach of laws and regulations under which we operate or lead to fines and could cause long-term damage to our business and reputation.

Our business depends on the upgrading of our existing networks.

We must continue to maintain, improve and upgrade our existing networks in a timely and satisfactory manner in order to retain and expand our customer base in each of our markets. A reliable and high quality network is necessary to manage turnover by sustaining our customer base, to maintain strong customer brands and reputation and to satisfy regulatory requirements, including minimum service requirements. The maintenance and improvement of our existing networks depends on our ability to:

- upgrade the functionality of our networks to offer increasingly customized services to our customers;
- increase coverage in some of our markets;
- expand and maintain customer service, network management and administrative systems;
- expand the capacity of our existing fixed copper and mobile networks to cope with increased bandwidth usage; and
- upgrade older systems and networks to adapt them to new technologies.

In addition, due to rapid changes in the telecommunications industry, our network investments may prove to be inadequate or may be superseded by new technological changes. Our network investments may also be limited by

market uptake and customer acceptance. If we fail to make adequate capital expenditures or investments, or to properly and efficiently allocate such expenditures or investments, the performance of our networks, both in real terms and relative to our competitors, could suffer, resulting in lower customer satisfaction, diminution of brand strength and increased turnover.

Many of these tasks are not entirely under our control and may be affected by applicable regulation. If we fail to maintain, improve or upgrade our networks, our services and products may be less attractive to new customers and we may lose existing customers to competitors, which could have a material adverse effect on our business, financial condition and results of operations.

We are continuously involved in disputes and litigation with regulators, competition authorities, competitors and other parties and are the subject of a number of investigations by judicial authorities. The ultimate outcome of such proceedings is generally uncertain. If any of these matters are resolved against us, they could, individually or in the aggregate, have a material adverse effect on our results of operations, financial condition and cash flows in any particular period.

We are subject to numerous risks relating to legal, tax, competition and regulatory proceedings in which we are currently a party or which could develop in the future. We are also the subject of a number of investigations by judicial authorities. Such proceedings and investigations are inherently unpredictable. Legal, tax, competition and regulatory proceedings and investigations in which we are, or may become, involved (or settlements thereof) may, individually or in the aggregate, have a material adverse effect on our results of operations and/or financial condition and cash flows in any particular period. Furthermore, our involvement in such proceedings and investigations may adversely affect our reputation.

If we, or another Group company, face an adverse decision in any of the legal proceedings to which we are a party, and are ordered to pay amounts greater than what we have recognized to cover potential liabilities, we may face adverse effects with respect to our and/or our Group's operations, financial position, income statement and cash flows.

The final outcomes of those proceedings are generally uncertain. As of December 31, 2018, we had, on a consolidated basis, recognized potential liabilities of 508 million euros. In recognizing these liabilities, we took into consideration the risks connected with each dispute and the relevant accounting standards, which require reserves to be recognized where liabilities are probable and can be estimated reliably. The provisions represent an estimate of the financial risk connected with the particular proceedings, in line with the relevant accounting standards. Nonetheless, we may be obligated to meet liabilities linked to unsuccessful outcomes for proceedings that were not taken into consideration when calculating those reserves and the provisions made may not be sufficient to fully meet such obligations through use of our reserves. Such a development could have adverse effects on our business, financial position, results of operations and cash flows.

Risks associated with the use of internet by our customers could cause us to suffer losses and adversely affect our reputation.

Pursuant to applicable Italian regulation, we, as a host and provider of data transmission services, are required to inform competent authorities without delay of any alleged illegal or illicit activity by our customers of which we are aware. We must also provide the authorities with any information we have identifying such customers. Any failure to comply with this obligation could cause us to become involved in civil proceedings or could harm public perception of our brand and services. Any such event could result in legal and/or regulatory proceedings, make us subject to direct or indirect monetary losses and could materially harm our reputation.

We are exposed to the risk of labor disputes, in particular as a result of our plan to restructure our labor costs.

We have undertaken a restructuring of various aspects of our workforce in an effort to improve standards of service and expertise and achieve greater efficiency and reduce personnel costs.

To that end, we have subscribed a new union agreement on June 11, 2018 at Labor Minister, where parties defined the path and a set of measures to manage the staff and support the 2018-2020 Strategic Plan.

The Agreement of June 11, 2018 concluded the complex process and the CIGS procedure, during the joint examination sessions pursuant to article 24 of Italian Legislative Decree no. 148/2015, with the signing of an agreement with the Ministry of Labor and Social Policy, which set out a series of measures and interventions geared at supporting the pursuit of the business objectives and management of the 4,500 declared redundancies in connection with the 2018-2020 Industrial Plan, which was approved by the Board of Directors on March 6, 2018, with non-traumatic, socially sustainable instruments.

Negotiations related to the Company Collective Bargaining Agreement are ongoing. See "Item 6 Directors, Senior Management and Employees—6.5.2 Industrial Relation" for further details.

Relations between us and our workers/trade unions are not generally adversarial and strikes or protests involving a majority of workers are not common, however, such occurrences carry a moderate risk of disruptions in work and/or reduced service. Generally, such occurrences would be expected negatively impact our customers, our business and our reputation.

FINANCIAL RISKS

Our leverage is such that deterioration in cash flow can change the expectations of our ability to repay our debt and the inability to reduce our debt could have a material adverse effect on our business. Continuing volatility in international credit markets may limit our ability to refinance our financial debt.

As of December 31, 2018, our consolidated gross financial debt was 30,972 million euros, compared to 32,864 million euros on December 31, 2017. Our consolidated net financial debt was 25,995 million euros as of December 31, 2018, compared to 26,091 million euros on December 31, 2017. Our high leverage continues to be a factor in our strategic decisions as it has been for a number of years and the reduction of our leverage remains a key strategic objective. As a result, however, we are reliant on cost-cutting and free cash flow to finance critical technology improvements and upgrades to our network, although we are taking steps to raise additional capital to support critical investment.

Due to the competitive environment and the continuing weak economic conditions, there could be deterioration in our income statement and financial measures used by rating agencies, such as Moody's, Standard & Poor's and Fitch, to assess our ability to repay our debt and determine our credit quality.

Although rating downgrades do not generally have an immediate impact on outstanding debt, other than outstanding debt instruments for which the interest expense is specifically impacted by such ratings, downgrades could adversely impact our ability to refinance existing debt and could increase costs related to refinancing existing debt and managing our derivatives portfolio.

Factors that are beyond our control such as deterioration in the telecommunications sector, unfavorable fluctuations in interest rates and/or exchange rates, further disruptions in the capital markets, particularly debt capital markets and continuing weakness in general economic conditions at the national level could have a significant effect on our ability to reduce our debt and refinance existing debt through further access to the financial markets. Because debt reduction is one of our strategic objectives, failure to reduce debt could be viewed negatively and could adversely affect our credit ratings.

The management and development of our business will require us to make significant further capital and other investments. If we are unable to finance our capital investments as described above, we may need to incur additional debt in order to finance such investment. Our future results of operations may be influenced by our ability to enter into such transactions, which, in turn, will be determined by market conditions and factors that are outside our control. In addition, if such transactions increase our leverage, it could adversely affect our credit ratings.

Fluctuations in currency exchange and interest rates and the performance of the equity markets in general may adversely affect our results.

In the past, we have made substantial international investments, significantly expanding our operations outside of the Euro zone, particularly in Latin America.

Our non-current operating assets are located as follows:

- Italy: as of December 31, 2018 and December 31, 2017, respectively, 47,795 million euros (88.4 percent of total non-current operating assets) and 48,591 million euros (87.4 percent of total non-current operating assets); and
- Outside of Italy: as of December 31, 2018 and December 31, 2017, respectively, 6,300 million euros (11.6 percent of total non-current operating assets) and 7,032 million euros (12.6 percent of total non-current operating assets). Non-current operating assets outside of Italy are primarily denominated in Brazilian Reais.

We generally hedge our foreign exchange exposure but do not cover conversion risk relating to our foreign subsidiaries. According to our policies, the hedging of the foreign exchange exposure related to the financial liabilities is mandatory. Movements in the euro exchange relative to other currencies (particularly the Brazilian Real) may adversely affect our consolidated results. A rise in the value of the euro relative to other currencies in certain countries in which we operate or have made investments will reduce the relative value of the revenues or assets of our operations from those countries and, therefore, may adversely affect our operating results or financial position.

In addition, we have raised, and may raise an increasing proportion, financing in currencies other than the euro, principally U.S. dollars and British pound sterling. In accordance with our risk management policies, we generally hedge the foreign currency risk exposure related to non-euro denominated liabilities, through cross-currency and interest rate swaps.

Furthermore, we are exposed to interest rates risk on that portion of our consolidated gross debt which is subject to the accrual of interest at floating rates; that represents 29 percent both as of December 2018 and 2017.

The decision to keep such a fixed—floating rate debt structure goes towards the goal to minimize negative interests' impact and is partially implemented through derivatives instruments whereby fixed rate liabilities are synthetically converted in floating rate ones. As of December 31, 2018, and December 31, 2017, we had derivative contracts in place for the sole management of our interest rate risk, including interest rate swaps, for notional amounts of 4,334 million euros. Any changes in interest rates that have not been adequately hedged by derivative contracts may result in increased financial liabilities in connection with our floating rate debt, which may have adverse effects on the results of our operations and cash flows.

An increase of sovereign spreads, and of the default risk they reflect, in the countries where we operate, may affect the value of our assets in such countries.

We may also be exposed to financial risks such as those related to the performance of the equity markets in general, and, more specifically, risks related to the performance of the share price of Group companies.

The potential impact of the UK's departure from the EU ("**Brexit**") will depend on negotiations on the separation agreement with the EU, the outcome of which remains uncertain, after the House of Commons rejected the separation plan backed by the UK Prime Minister in March 2019.

Brexit and possible outcomes of the exit negotiations could cause further instability in the global and European financial markets already made delicate by the trade dispute between USA and China.

The potential effects of Brexit could negatively affect our financial condition, our business, and the related economic results and cash flows.

COMPLIANCE RISKS

Because we operate in a heavily regulated industry, regulatory decisions and changes in the regulatory environment could adversely affect our business.

Our fixed and mobile telecommunications operations, in Italy and abroad, are subject to regulatory requirements. As a member of the EU, Italy has adapted its regulatory legislation and rules for electronic communications services to the framework established by the EU Parliament and Council.

Pursuant to the EU regulatory framework, the Italian regulator, Autorità per le Garanzie nelle Comunicazioni ("**AGCom**"), is required to identify operators with "Significant Market Power" ("**SMP**") in the relevant markets subject to regulation. On the basis of market analyses proceedings (Market Analyses), AGCom imposes requirements necessary to address identified competition problems. Current requirements are mainly focused on the regulation of our wholesale business, while the regulation of retail markets has been largely withdrawn, with the exception of price tests on retail access offers (for telephone, broadband and ultrabroadband services).

Within this regulatory framework, the main risks we face include the lack of predictability concerning both the timing of the regulatory proceedings and their final outcome and possible AGCom decisions that apply retroactively and their potential impact on expected Group results and on the guidance presented to the market (e.g., review of prices from prior years following the decisions of Administrative Courts, repricing decisions, proceedings that impact technological decisions and return on investment).

In principle, a new "round" of Market Analyses should be conducted by AGCom every three years, in order to deal with the evolution of market conditions and technology developments and set the rules for the subsequent three-year period. However, the regulatory review process does not always follow the expected schedule.

Regulation is a key factor in evaluating the likelihood of return on investments and therefore in deciding where to invest. Regulatory uncertainty and regulatory changes imposed on us can impact our revenues and can make it more difficult to make important investment decisions.

Moreover, a high level of disputes arising from operators challenging AGCom decisions before Administrative Courts result in an even greater degree of uncertainty with respect to rules and economic requirements.

The Italian Antitrust Authority, *Autorità Garante per la Concorrenza ed il Mercato* ("**AGCM**"), may also intervene in our business, setting fines and/or imposing changes in our service provision operating processes and in our offers.

Our Brazilian Business Unit also is subject to extensive regulation. Our international operations, therefore, face similar regulatory issues as we face in Italy, including the possibility for regulators to impose obligations and conditions on how we operate our businesses in Brazil as well as taking decisions that can have an adverse effect on our results, including setting, and in particular, reducing the mobile termination rates we can charge. As a result, the decisions of regulators or the implementation of new regulations in Brazil and the costs of our compliance with any such decisions or new regulations, may limit our flexibility in responding to market conditions, competition and changes in our cost base which could individually or in the aggregate, have a material adverse effect on our business and results of operations.

Due to the continuous evolution of the regulatory regime affecting various parts of our business in Italy and in our international operations, we are unable to clearly predict the impact of any proposed or potential changes in the regulatory environment in which we operate in Italy, Brazil and our other international markets. Regulations in the telecommunications industry are constantly changing to adapt to new competition and technology. Changes in laws, regulation or government policy could adversely affect our business and competitiveness. In particular, our ability to compete effectively in our existing or new markets could be adversely affected if regulators decide to expand the restrictions and obligations to which we are subject or extend them to new services and markets. Finally, decisions by regulators regarding the granting, amendment or renewal of our authorizations, or those of third parties, could adversely affect our future operations in Italy and in other countries where we operate.

For further information regarding the matters discussed above and other aspects of the regulatory environments in which our businesses operate, see "Item 4. Information on the TIM Group—Item 4.3 Regulation".

We operate under authorizations granted by government authorities.

Many of our activities require authorizations from governmental authorities both in Italy and abroad. These authorizations specify the types of services the operating company holding such authorization may provide. The continued existence and terms of our authorizations are subject to review by regulatory authorities and to interpretation, modification or termination by these authorities. Although authorization renewal is not usually guaranteed, most authorizations do address the renewal process and terms that may be affected by political and regulatory factors.

Many of these authorizations are revocable for public interest reasons. In addition, our current authorizations to provide networks and services require that we satisfy certain obligations, including minimum specified quality levels, service and coverage conditions. Failure to comply with these obligations could result in the imposition of fines or even in the revocation or forfeiture of the authorization. In addition, the need to meet scheduled deadlines may require us to expend more resources than otherwise budgeted for a particular network build-out.

Additional authorizations may also be required if we expand our services into new product areas, and such authorizations may be related to auctions (e.g., in the assignment of spectrum right of use) or otherwise prove expensive or require significant cash outlays, or have certain terms and conditions, such as requirements related to coverage and pricing, with which we may not have previously had to comply. If we are unable to obtain such authorizations within the expected timeframe, at a commercially acceptable cost, or if the authorizations include onerous conditions, it could have a material adverse effect on our business, financial condition and results of operations.

In Brazil we also operate under an authorizations regime. As a result, we are obliged to maintain minimum quality and service standards. Our failure to comply with the requirements imposed by Regulatory Agency for Telecommunications—Agencia Nacional de Telecomunicacoes ("**ANATEL**") and by the Brazilian Government may result in the imposition of fines or other government actions, including the suspension of the service commercialization for a given period.

Actual or perceived health risks or other problems relating to mobile handsets or transmission masts could lead to litigation or decreased mobile communications usage.

The effects of, and any damage caused by, exposure to an electromagnetic field were and are the subject of careful evaluations by the international scientific community, but until now there is no scientific evidence of harmful effects on health. We cannot rule out that exposure to electromagnetic fields or other emissions originating from wireless handsets will not be identified as a health risk in the future.

Our mobile communications business may be harmed as a result of these alleged health risks. For example, the perception of these health risks could result in a lower number of customers, reduced usage per customer or potential consumer liability. In addition, although Italian law already imposes strict limits in relation to transmission equipment, these concerns may cause regulators to impose greater restrictions on the construction of radio base station towers or other infrastructure, which may hinder the completion of network build-outs and the commercial availability of new services and may require additional investments.

We face the risk that our organizational policies and procedures embodied in the organizational model prepared pursuant to Legislative Decree 231/2001 may fail to prevent certain officers and employees from engaging in unlawful conduct, for which we would be jointly liable.

We have put in place an organizational model pursuant to Legislative Decree 231/2001, in order to create a system of rules capable of preventing certain forms of unlawful conduct by senior management, executives and employees generally that might result in liabilities for us. The organizational model has been adopted by us and by our Italian subsidiaries. A specific version of the organizational model has been adopted by TIM Participacoes pursuant to the anti-corruption Brazilian law (Lei 12.846/13).

The organizational model is continuously reviewed and must be kept up to date to reflect changes in operations and in the regulatory environment. We have established a 231 steering committee to prepare and consider proposals for changes to the model, for submission to the Board for approval.

Notwithstanding the existence of this model or any updates that we may make to it, there can be no assurances that the model will function as designed, or that it will be considered adequate by any relevant legal authority. If the model is inadequate or deemed to be so, and we were held liable for acts committed by our senior management, executives and employees or are found otherwise non-compliant with the requirements of the legislation, we may be ordered to pay a fine, our authorizations, licenses or concessions may be suspended or revoked, and we may be prohibited from conducting business, contracting with the Italian public administration, or advertising goods and services. Such developments would have adverse effects on our business, results of operations, financial condition and cash flows.

3.2 EXCHANGE RATES

We publish our consolidated financial statements in euros. References to "€", "euro" and "Euro" are to the euro, the single unified currency that was introduced in Italy and 10 other member states of the EU on January 1, 1999. References to "U.S. dollars", "dollars", "U.S.$" or "$" are to U.S. dollars, the currency of the United States of America.

For convenience only (except where noted otherwise), certain euro figures have been translated into dollars at the rate (the "Euro/Dollar Exchange Rate") of €1.00= U.S.$ 1.1456, using the last noon buying rate in The City of New York for cable transfers in foreign currencies as announced by the Federal Reserve Bank of New York for customs purposes (the "**Noon Buying Rate**") on December 31, 2018.

These translations should not be construed as a representation that the euro amounts actually represent such dollar amounts or have been or could be converted into dollars at the rate indicated.

For the purpose of this Annual Report, "billion" means a thousand million.

The Ordinary Shares (the "**Ordinary Shares**") and Savings Shares (the "**Savings Shares**") of TIM trade on *Mercato Telematico Azionario* ("**Telematico**"), managed by Borsa Italiana S.p.A. ("**Borsa Italiana**") in euro. Fluctuations in the exchange rate between the euro and the U.S. dollar will affect the U.S. dollar equivalent of the euro price of the Ordinary Shares and the Savings Shares and the price of the Ordinary Share American Depositary Shares ("**Ordinary Share ADSs**") and the Savings Share American Depositary Shares ("**Savings Share ADSs**"), on the New York Stock Exchange ("**NYSE**"). Cash dividends are paid in euro. Exchange rate fluctuations will affect the U.S. dollar amounts received by owners of Ordinary Share ADSs and Savings Share ADSs upon conversion by the Depositary of cash dividends paid in euro on the underlying Ordinary Shares and Savings Shares. See "Item 10. Additional Information—10.5 Description of American Depositary Receipts".

3.3 SELECTED FINANCIAL AND STATISTICAL INFORMATION

The selected financial data set forth below are consolidated financial data of the TIM Group as of and for each of the years ended December 31, 2018, 2017, 2016, 2015 and 2014, which have been extracted or derived, with the exception of amounts presented in U.S. dollars, financial ratios and statistical data, from the Consolidated Financial Statements of the TIM Group prepared in accordance with IFRS as issued by IASB and which have been audited by the independent auditor PricewaterhouseCoopers S.p.A.

In 2018, the Group applied the accounting policies on a basis consistent with those of the previous years, except for the new standards and interpretations adopted by the Group since January 1, 2018, the impact of which is illustrated under "*Adoption of the new IFRS 9 and IFRS 15 standards*" described in the "Note—Accounting Polices" of the Notes to the Consolidated Financial Statements included elsewhere herein.

The selected financial data below should be read in conjunction with the Consolidated Financial Statements and notes thereto included elsewhere in this Annual Report.

	Year ended December 31,					
	2018	2018(*)	2017(*)	2016(*)(**)	2015(*)(**)	2014(*)(**)
	(millions of U.S. dollars, except percentages, ratios, employees and per share amounts)(1)	(millions of euros, except percentages, ratios, employees and per share amounts)				
Separate Consolidated Income Statement Data:						
Revenues	**21,698**	**18,940**	**19,828**	**19,025**	**19,719**	**21,574**
Operating profit (loss)	**643**	**561**	**3,291**	**3,722**	**2,963**	**4,529**
Profit (loss) before tax from continuing operations	**(890)**	**(777)**	**1,777**	**2,799**	**453**	**2,350**
Profit (loss) from continuing operations	**(1,320)**	**(1,152)**	**1,287**	**1,919**	**50**	**1,420**
Profit (loss) from Discontinued operations/Non-current assets held for sale	—	—	—	47	611	541
Profit (loss) for the year	**(1,320)**	**(1,152)**	**1,287**	**1,966**	**661**	**1,961**
Profit (loss) for the year attributable to Owners of the Parent (2)	*(1,616)*	*(1,411)*	*1,121*	*1,808*	*(70)*	*1,351*
Capital Expenditures	**7,341**	**6,408**	**5,701**	**4,876**	**5,197**	**4,984**
Financial Ratios:						
Operating profit (loss)/Revenues (ROS)(%)	3.0%	3.0%	16.6%	19.6%	15.0%	21.0%
Employees, average salaried workforce in the Group, including personnel with temporary work contracts:						
Employees (excluding employees relating to the consolidated companies considered as Discontinued operations/ Non-current assets held for sale) (average number)	54,423	54,423	54,946	57,855	61,553	59,285
Employees relating to the consolidated companies considered as Discontinued operations/ Non-current assets held for sale (average number)	—	—	—	2,581	15,465	15,652
Basic and Diluted earnings per Share (EPS)(3):						
Ordinary Share	**(0.08)**	**(0.07)**	**0.05**	**0.08**	**0.06**	**(0.03)**
Savings Share	**(0.08)**	**(0.07)**	**0.06**	**0.09**	**0.07**	**(0.03)**
Dividends:						
per Ordinary Share (4)	—	—	—	—	—	—
per Saving Share (4)	0.032	0.0275	0.0275	0.0275	0.0275	0.0275

	As of December 31,					
	2018	2018(*)	2017(*)	2016(*)	2015(*)	2014(*)
	(millions of U.S. dollars, except employees)(1)	(millions of euros, except employees)				
Consolidated Statement of Financial Position Data:						
Total Assets	**75,173**	**65,619**	**68,783**	**70,446**	**71,268**	**71,596**
Equity:						
Equity attributable to owners of the Parent	22,371	19,528	21,557	21,207	17,554	18,068
Non-controlling interests	2,542	2,219	2,226	2,346	3,695	3,516
Total Equity	**24,913**	**21,747**	**23,783**	**23,553**	**21,249**	**21,584**
Total Liabilities	**50,260**	**43,872**	**45,000**	**46,893**	**50,019**	**50,012**
Total Equity and liabilities	**75,173**	**65,619**	**68,783**	**70,446**	**71,268**	**71,596**
Share capital (5)	**13,274**	**11,587**	**11,587**	**11,587**	**10,650**	**10,634**
Net financial debt (6)	**29,780**	**25,995**	**26,091**	**25,955**	**28,475**	**28,021**
Employees, number in the Group at year-end, including personnel with temporary work contracts:						
Employees (excluding employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale) (number at year-end)	57,901	57,901	59,429	61,229	65,867	66,025
Employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale (number at year-end)	—	—	—	—	16,228	16,420

	As of December 31,				
	2018	2017	2016	2015	2014
	(thousands)				
Statistical Data:					
Domestic (Italy) Business Unit					
Physical accesses (7)	18,212	18,995	18,963	19,209	19,704
Of which physical accesses (retail)	*10,149*	*11,044*	*11,285*	*11,742*	*12,480*
Broadband accesses	11,184	10,154	9,206	8,890	8,750
Of which retail broadband accesses	*7,575*	*7,641*	*7,191*	*7,023*	*6,921*
Mobile lines	31,818	30,755	29,617	30,007	30,350
Brazil Business Unit					
Mobile lines	55,923	58,634	63,418	66,234	75,721

(*) Starting from January 1, 2018, the TIM Group adopted IFRS 9 (*Financial Instruments*) retroactively, using the specific exemptions provided for by the same standard and without the restatement of the previous periods compared, as well as IFRS 15 (*Revenues from contracts with customers*) using the simplified retrospective method. Consequently, the economic and financial data for previous years have not been restated. Furthermore, as permitted by IFRS 9, TIM Group has chosen to continue to apply the hedge accounting requirements of IAS 39, instead of the requirements of IFRS 9. For further details, reference should be made to the Note "Accounting principles" of the Notes to the Consolidated Financial Statements included elsewhere herein.

(**) On November 13, 2013, TIM accepted the offer of Fintech Group to acquire the entire controlling interest of TIM Group in the Sofora—Telecom Argentina group. The agreements made in connection with this transaction were subsequently modified in October 2014. As a result, and in accordance with IFRS 5 (Non-current Assets Held for Sale and Discontinued Operations), starting with the fourth quarter of 2013, the Sofora—Telecom Argentina group has been treated as Discontinued operations/Non-current assets held for sale. On March 8, 2016, the TIM Group completed the sale of Sofora—Telecom Argentina group.

(1) For the convenience of the reader, Euro amounts for 2018 have been converted into U.S. dollars using the Euro/Dollar Exchange Rate in effect on December 31, 2018 of €1.00 = 1.1456 U.S.$.

(2) For the purposes of IFRS, "Parent", as used in this Annual Report, means TIM S.p.A.

(3) In accordance with IAS 33 (Earnings per share), basic earnings per Ordinary Share is calculated by dividing the Group's profit (loss) available to shareholders by the weighted average number of shares outstanding during the year, excluding treasury shares. Since TIM has both Ordinary and Savings Shares outstanding, the calculations also take into account the requirement that holders of Savings Shares are entitled to an additional dividend equal to 2% of 0.55 euros per share above dividends paid on the Ordinary Shares.

For the purpose of these calculations, the weighted average number of:

- Ordinary Shares was:
  - 15,039,368,195 for the year ended December 31, 2018 and 2017;
  - 15,039,128,128 for the year ended December 31, 2016;
  - 14,889,773,009 for the year ended December 31, 2015; and
  - 14,851,386,060 for the year ended December 31, 2014.
- Savings Shares was:
  - 6,027,791,699 for the years ended December 31, 2018, 2017 and 2016;
  - 6,026,677,674 for the year ended December 31, 2015; and
  - 6,026,120,661 for the year ended December 31, 2014.

For diluted earnings per share the weighted average number of shares outstanding is adjusted assuming conversion of all dilutive potential shares. Potential shares are those securities that, if converted into shares, would increase the total number of shares outstanding and reduce the earnings attributable to each share. Potential shares include options, warrants and convertible securities. The Group's profit (loss) is also adjusted to reflect the impact of the conversion of potential shares net of the related tax effects.

Diluted earnings per share was:

- 0.06 for Ordinary Share and Savings Share in 2018; and
- nil in 2014, 2015, 2016 and in 2017.

(4) TIM's dividend coupons for its Savings Shares for the year ended December 31, 2018, will be clipped on June 24, 2019 and will be payable from June 26, 2019.

(5) Share capital represents share capital issued net of the accounting par value of treasury shares; accounting par value is the ratio of total share capital and the number of issued shares.

(6) Net Financial Debt is a "Non-GAAP Financial Measure" as defined in Item 10(e) of Regulation S-K under the 1934 Act. For further details please see "Item 5. Operating and Financial Review and Prospects—5.2 Results of Operations for the Three Years Ended December 31, 2017—5.2.3 Non-GAAP Financial Measures".

(7) Excludes full-infrastructured OLOs and FWA-Fixed Wireless Access.

3.4 DIVIDENDS

The determination of our future dividend policy, and the amounts thereof, will depend upon a number of factors, including but not limited to our earnings, financial condition and cash requirements, prospects and such other factors as may be deemed relevant at the time.

The following table sets forth the dividends per Ordinary Share and per Savings Share declared by TIM with respect to each of the last five fiscal years and the aggregate dividends paid in such years. Actual dividends paid are rounded to the nearest whole cent.

No ordinary share dividend is being paid for the year ended December 31, 2018.

	Dividends on Ordinary Shares			Dividends on Savings Shares		
Year ended December 31,	Euros per Share	U.S. Dollars per Share(1)	(millions of euros)	Euros per Share	U.S. Dollars per Share(1)	(millions of euros)
2014	—	—	—	0.0275	0.0307	165.72
2015	—	—	—	0.0275	0.0310	165.76
2016	—	—	—	0.0275	0.0307	165.76
2017	—	—	—	0.0275	0.0338	165.76
2018(2)	—	—	—	0.0275	0.0308	165.76

(1) Euro amounts have been translated into U.S. dollars using the Noon Buying Rate in effect on the respective payment dates. For the year ended December 31, 2018, Euro amounts have been translated into U.S. dollars using the Noon Buying Rate in effect on April 5, 2019.

(2) TIM's dividend coupons for its Savings Shares for the year ended December 31, 2018, will be clipped on June 24, 2019 and will be payable from June 26, 2019.

Payment of annual dividends is subject to approval by the holders of Ordinary Shares at the annual general shareholders' meeting, which must be held within 180 days after the end of the financial year to which it relates (pursuant to article 18, second paragraph, of the Company's Bylaws). In addition, Article 21 of the Company's Bylaws gives the Board of Directors the power to approve the distribution of "interim dividends". Pursuant to Italian law, the distribution may be approved after the final approval of the preceding year's financial statements, and the interim dividends may not exceed the lower of (i) the difference between profits from the preceding fiscal year and amounts required to be attributed to legal and statutory reserves and (ii) available reserves. Once paid in compliance with applicable laws, shareholders cannot be required to repay interim dividends to the Company if the shareholders collected such dividends in good faith. Dividends not collected within five years from the date they become payable will be forfeited in favor of the Company. If profits are not fully distributed, additional reserves are created.

According to the Italian Civil Code, before dividends may be paid with respect to any year, an amount equal to 5% of the profit of the Company for such year must be set aside to the legal reserve until the legal reserve, including amounts set aside during prior years, is at least equal to one-fifth of the par value of the Company's issued share capital. This legal reserve is not available for payment of dividends. Such restriction on the payment of dividends applies, on a non-consolidated basis, to each Italian subsidiary of the TIM Group. The Company may also pay dividends out of available retained earnings from prior years or other reserves.

Dividends in respect of Ordinary Shares and Savings Shares held with Monte Titoli S.p.A. ("**Monte Titoli**") are automatically credited to the accounts of the beneficial owners with the relevant participant of Monte Titoli, without the need for presentation by such beneficial owners of any documentation. See "Item 10. Additional Information—10.4 Description of Capital Stock".

Arrangements between Euroclear or Clearstream and Monte Titoli permit the shareholders to collect the dividends through Euroclear or Clearstream. Holders of American Depositary Receipts ("**ADRs**") are entitled to receive payments in respect of dividends on the underlying Ordinary Shares and Savings Shares, as the case may be, in accordance with the relevant Deposit Agreement.

Dividends payable on the Company's Ordinary Shares and Savings Shares may be subject to deduction of Italian withholding tax. See "Item 10. Additional Information—10.6 Taxation". Italian regulations do not contain any specific restrictions on the payment of dividends to non-residents of Italy. See "Item 10. Additional Information—10.2 Exchange Controls and Other Limitations Affecting Security Holders".

Pursuant to Italian law, in connection with the payment of dividends, participants of Monte Titoli are required to supply to the Italian tax authorities certain information concerning the identity of non-resident shareholders holding Ordinary Shares or Savings Shares. Shareholders are required to provide their Italian tax identification number, if any, or alternatively, in the case of legal entities, their name, country of establishment and address, or in the case of individuals, their name, address and place and date of birth, or in the case of partnerships, the information required for legal entities and the information required for individuals with respect to one of their representatives. In the case of Ordinary Share ADSs and Savings Share ADSs owned by non-residents in Italy, TIM understands that the provision of information concerning the Depositary, in its capacity as holder of record of the Ordinary Shares and Savings Shares, as the case may be, will satisfy these requirements.

The Depositary, in accordance with instructions from TIM, will provide information to beneficial owners of Ordinary Share ADSs and Savings Share ADSs, that are considered U.S. residents for purposes of applicable law. To the extent such owners wish to benefit from reduced withholding tax rates on dividends under an income tax treaty, claims for such benefits must be accompanied by the required information. See "Item 10. Additional Information—10.6 Taxation".

Item 4. INFORMATION ON THE TIM GROUP

4.1 BUSINESS

4.1.1 BACKGROUND

The legal name of the company is Telecom Italia S.p.A. also named "TIM S.p.A.".
The Annual Shareholders Meeting held on May 25, 2016 approved an amendment to the Company's bylaws, permitting the company to be named "Telecom Italia S.p.A." or "TIM S.p.A.".

TIM is a joint-stock company established under Italian law on October 29, 1908, with registered offices in Milan at Via Gaetano Negri 1. The telephone number is +39 (02) 85951. The company is recorded in the Milan Companies Register at number 00488410010, R.E.A. (Repertorio Economico Amministrativo) at number 1580695 and R.A.E.E. (Rifiuti di Apparecchiature Elettriche ed Elettroniche) register at number IT08020000000799.

Our Depositary in New York (JP Morgan Chase Bank N.A.) is presently located at 4 New York Plaza, New York, New York 10004.

The duration of the company, as stated in the company's Bylaws, extends until December 31, 2100.

After the effectiveness of the demerger of Telco S.p.A. (previously the largest shareholder of TIM and whose investors were Assicurazioni Generali S.p.A., Intesa Sanpaolo S.p.A., Mediobanca S.p.A. and Telefónica S.A.), on June 24, 2015, Vivendi S.A. ("**Vivendi**"), an integrated media and content group based in France, became o our largest shareholder with an ownership stake in TIM equal to 14.9% of Ordinary Shares. In the following months, Vivendi further increased its shareholding in the Company and, as of April 8, 2019, Vivendi holds 23.94% of the ordinary share capital of TIM. Vivendi does not hold Savings Shares (or Savings Share ADSs) and does not have different voting rights in meetings of ordinary shareholders of TIM.

At the Shareholders' Meeting held on April 24, 2018, a new Board of Statutory Auditors was appointed for a 3-year term that terminates following the approval of the financial statements for the year ended December 31, 2020. Vivendi's slate obtained the higher number of votes and as a result, 3 out of 5 Standing Auditors were appointed from such slate.

The Shareholders' Meeting held on May 4, 2018, established the number of Directors at 15, the duration of their term of office at three financial years (until the approval of the financial statements as of 31 December 2020) and appointed a new Board of Directors. As the slate presented by the shareholders Elliott International LP, Elliott Associates LP e The Liverpool Limited Partnership received more votes, in accordance with the Bylaws, 10 out of 15 Directors were appointed from this slate, while the remaining 5 were appointed from Vivendi's slate.

See "Item 6. Directors, Senior Management and Employees—6.1 Directors" for further details.

We file Annual Reports on Form 20-F and furnish periodic reports on Form 6-K to the SEC. Our SEC filings are available at the website maintained by the SEC at www.sec.gov.

As described elsewhere in this Annual Report, certain reports, statements and presentations related to TIM can be found on our website at www.telecomitalia.com.

4.1.2 DEVELOPMENT

On February 21, 2019, TIM presented its 2019–2021 Strategic Plan. The 2019-2021 Plan sets out the primary strategic objectives of the TIM Group over the next three years as well as a number of strategic priorities to achieve such objectives.

For more details, please see "4.1.7 Updated Strategy".

4.1.3 BUSINESS

The Group operates mainly in Europe, South America and the Mediterranean Basin.

The TIM Group is principally engaged in the communications sector and, particularly, the fixed and mobile national and international telecommunications sector.

The operating segments of the TIM Group are organized according to the respective geographical location of the telecommunications business (Domestic—Italy and Brazil).

In 2018, there were no significant changes in the scope of consolidation of the TIM Group.

For further details please see "Item 5. Operating and Financial Review and Prospects—5.2 Results of Operations for the Three Years Ended December 31, 2018—5.2.2. Business Segments" and "Note—Scope of Consolidation" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The following is a summary description of the TIM Group's principal geographical business areas.

Domestic Business Area

TIM operates as the market leader in Italy providing telephone and data services on fixed-line and mobile networks for final customers (retail) and other operators (wholesale).

Olivetti, part of the Business segment of Core Domestic, operates in the area of office products and services for information technology ("**IT**"), covering the "traditional" offer areas of the office and retail world as well as the innovative world of IoT, M2M and Big Data.

INWIT S.p.A. operates in the electronic communications infrastructure sector, specifically relating to infrastructure for housing radio transmission equipment for mobile telephone networks, for TIM and other operators.

The **Telecom Italia Sparkle group** operates at an international level in the development of fibre-optic networks for wholesale customers (in Europe, the Mediterranean and South America).

TIM is one of four mobile operators authorized to provide services using GSM 900 technology in Italy and one of four operators authorized to provide services using GSM 1800 (formerly DCS 1800) technology in Italy. It is also one of four operators holding a UMTS authorization and providing third-generation telephony services in Italy and it is one of the three operators that acquired a 800MHz spectrum in 2011 to provide 4G Service in Italy. In addition, TIM possesses 2600MHz and 1450MHz licenses.

The auction for the award of frequencies for 5G services was held during 2018. TIM awarded the largest part of the spectrum, respectively 10+10 Mega at 700MHz, 80 Mega in the 3.6-3.8 GHz band and 200 Mega in the 27 GHz band, strengthening its competitive position in terms of bandwidth and quality of service offered.

At December 31, 2018, the TIM Group had approximately 10,149 thousand physical accesses (retail) in Italy, a decrease of 895 thousand compared to December 31, 2017. The broadband portfolio in Italy was 11,184 thousand accesses at December 31, 2018 (consisting of approximately 7,575 thousand retail accesses and 3,609 thousand wholesale accesses), an increase of 1,030 thousand compared to December 31, 2017 (10,154 thousand accesses). In addition, the Telecom Italia Group had approximately 31,818 thousand mobile telephone lines in Italy at December 31, 2018, an increase of 1,063 thousand compared to December 31, 2017.

Brazil Business Area

TIM Brasil is a telecommunications company that offers mobile voice and data services, broadband Internet access, value-added services, and other telecommunications services and products in Brazilian market. These services are provided through 4G, 3G and GSM technologies. With the acquisitions of 700MHz and 2.5GHz radiofrequencies, focus is on accelerating the development of the 4G network. With the acquisitions of Intelig Telecomunicações (now TIM S.A.), Tim Fiber RJ and Tim Fiber SP (now merged into TIM S.A.), TIM Brasil's portfolio of services has been expanded by offering optic fiber data transmission using full IP technology, such as DWDM and MPLS and offering residential and business broadband services.

At December 31, 2018, the TIM Group had 55.9 million mobile telephone lines in Brazil, as compared to 58.6 million at December 31, 2017.

4.1.4 Disposals And Acquisitions of Significant Equity Investments in 2018

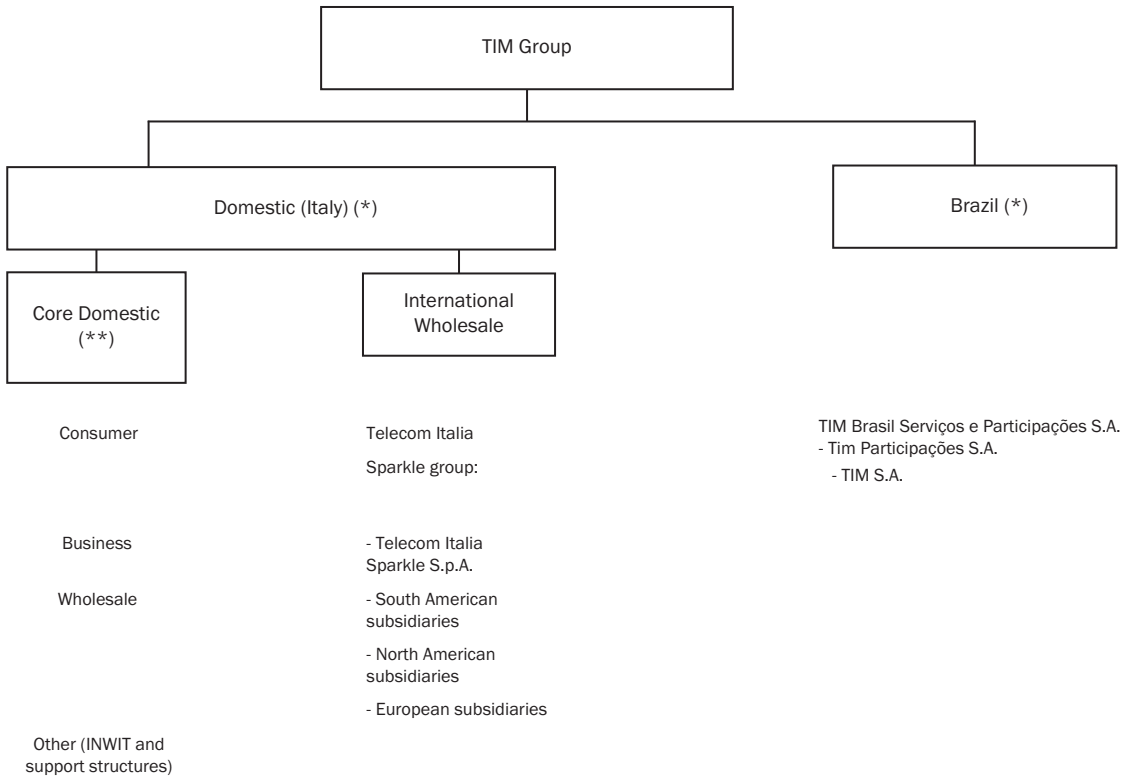
For a description of disposals and acquisitions of significant equity investments in 2018 please see "Note —Scope of consolidation" and "Note—Investments" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

4.1.5 Recent Developments During 2019

On April 5, 2019 the rating agency Fitch Ratings downgraded TIM's Long Term Issuer Default Rating to BB+ with a Stable outlook.

4.1.6 Overview of The TIM Group's Major Business Areas

The following is a chart of the TIM Group's Business Units as of December 31, 2018:



(*) Business unit.

(**) Main subsidiaries: TIM S.p.A., INWIT S.p.A., Telenergia S.p.A., Telecontact Center S.p.A., Olivetti S.p.A., HR Services S.r.l, TIMVision and Noverca.

For further details about companies which are part of the Business Units, please see Note "List of companies of the TIM Group" of the Notes to the Consolidated Financial Statements included elsewhere herein.

For revenues, operating profit (loss) and number of employees of the TIM Group's Business Units please see "Item 5. Operating and financial review and prospects—5.2 Results of operations for the three years ended December 31, 2018—5.2.5 Business unit financial data".

4.1.7 Updated Strategy

Strategic Priorities and Objectives for the 2019–2021 Strategic Plan

On February 21, 2019, TIM's Board of Directors approved the 2019–2021 Strategic Plan (the "**Plan**").

The Plan focuses on improving TIM's execution and timely delivery of what planned as a key element for the organic transformation of TIM, while exploiting strategic options to unlock value.

The main objectives over the Plan's horizon are the following:

- delevering the Company;
- simplifying and optimizing processes;
- delivering a sustainable return on capital invested, strengthening cash flow generation through top line stabilization, leaner cost structure and working capital optimization;
- optimizing invested capital through network sharing, key to enhance ROIC;
- revamping Domestic business focusing on quality, TIM's scale and its technical competences;
- enhancing Brasil riding growth waves and continuing towards postpaid migration.

The main strategic priorities in the domestic (Italian) market are:

Consumer:

- restart from competitive advantages: network quality, scale and client proximity, and technical competences and geographical presence;
- shift from "number of Gigabytes" to "quality of Gigabytes";
- strong push on upselling to put Average Revenue per User (ARPU) on an upward trend.

Content:

- revamp offer as a media aggregation platform with differentiating value proposition versus competitors;
- establish new partnerships to enrich content catalogue.

Business:

- become "one stop shop", top quality ICT partner for SMEs;
- evolve towards a real ICT solution provider for the largest clients.

Wholesale:

- defend wholesale accesses market share through fast UBB migration;
- maintain UBB coverage leadership;
- increase of revenues share in not regulated services.

An important contribution to the Plan is also expected from the subsidiaries TIM Brasil, Inwit and Telecom Italia Sparkle, for which strategic priorities include:

TIM Brasil:

- strongly expand its mobile post-paid customers;
- grow its B2B revenues;
- develop the fixed residential UBB customer base.

Inwit:

- strengthen its leadership in Italian wireless infrastructure market with growing tenancy ratio, more customers, new towers;
- establish foundations for 5G monetization (also leveraging on the potential business combination with Vodafone).

Telecom Italia Sparkle:

- relaunch of the company scaling up infrastructure presence and growing in Enterprise networking and cloud;
- evaluate partnerships to accelerate growth and to unlock strategic optionality.

The strong focus on Execution is one of the key pillars of the plan requiring discipline, focus and simplicity. A streamline organization is needed to promote accountability and improve the way of working. Dedicated Delivery Units have been set up to facilitate and orchestrate the transformation, particularly on transversal topics and to ensure the implementation of the identified cost cutting initiatives. A revised corporate culture capable of building capabilities, fostering talents and engaging the entire employee base will complete the operating platform transformation.

On the Technological front, the Plan sets modernization, simplification and artificial intelligence at the core of future investments in order to ensure quality excellence and contain capital expenditures intensity. It will be finalized the migration to an all-IP network and it will be built a brand new and fully automated 5G network. At the same time the decommissioning of legacy platforms, equipment and applications will be completed as soon as possible.

Quality and reliability on all customer touch points (activation, delivery and problem resolution) are at the center of the strategy. To this aim the most important processes will be redesigned and a central end-to-end factory will lead the process re-engineering effort.

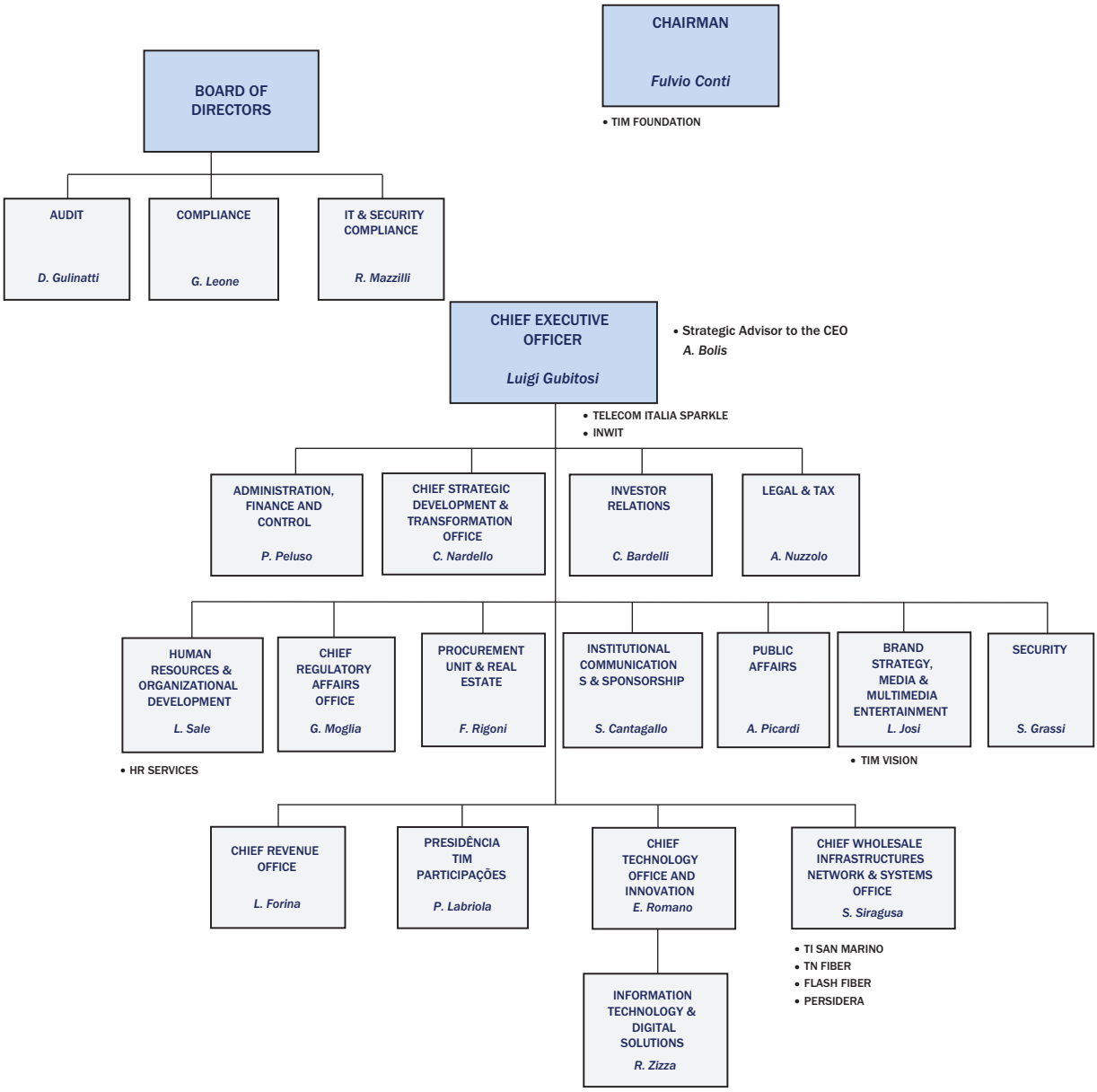
On February 21, 2019, TIM and Vodafone Italia announced to have signed a Memorandum of Understanding and agreed to enter into exclusive discussions for a new network sharing partnership. Both companies intend to enter into an active network sharing partnership for 5G, to consider active sharing for 4G and to expand their existing passive sharing agreement. Vodafone and TIM have also agreed to explore a potential transaction that would entail the parties consolidating their approximately 22,000 passive towers located in Italy into a single business entity, potentially combining Vodafone's passive tower infrastructure with the infrastructure of Inwit, the 60%-owned and publicly listed tower subsidiary of TIM. The partnership would allow acceleration of 5G deployment to have a wider geographic reach and to achieve significant operating expenditure and capital expenditure synergies.

TIM started discussions with Open Fiber to explore all possible options including a full business combination, in order to explore the value creation opportunity that a single network presents. The Company continues to work with its financial advisors on exploring the single network opportunity and on maximizing the value of TIM's fixed network. Convergence of the two networks would carry advantages for all stakeholders, including the companies involved, the market, shareholders and the country as a whole, which would benefit from faster, cutting-edge infrastructure.

There can be no assurance that these objectives will actually be achieved. See "Introduction—Cautionary Statement for Purposes of the "Safe Harbor" Provisions of the United States Private Securities Litigation Reform Act of 1995".

4.1.8 THE ORGANIZATIONAL STRUCTURE

The following diagram highlights the organizational structure of the TIM Group as of April 8, 2019:



4.2 BUSINESS UNITS

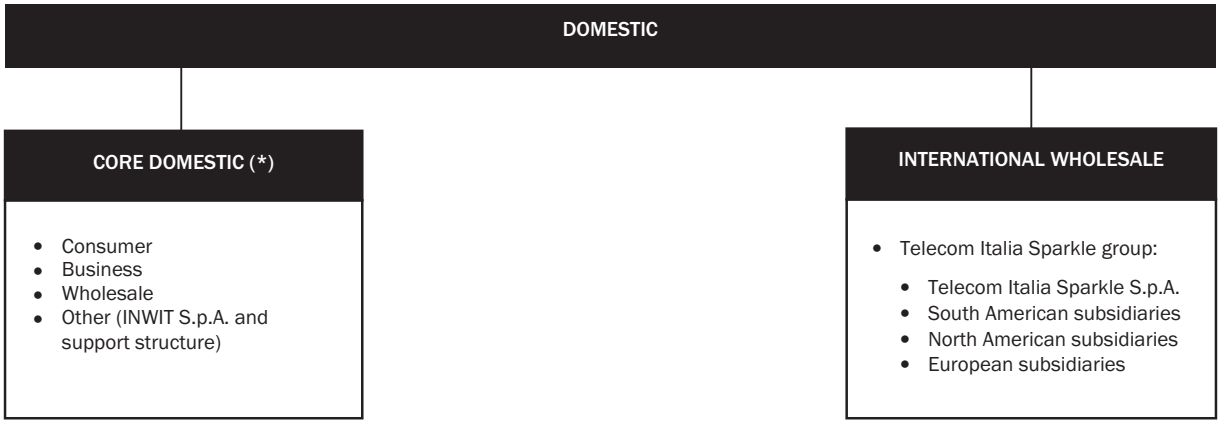
4.2.1 Domestic

The Domestic Business Unit operates as the market leader in providing voice and data services on fixed and mobile networks for final retail customers and other wholesale operators. Internationally, the Business Unit develops fiber optic networks for wholesale customers (in Europe, in the Mediterranean and in South America).

The Business Unit operates, through INWIT, in the electronic communications infrastructure business, specifically infrastructure for housing radio transmission equipment for mobile telephone networks for TIM and other operators.

Olivetti operates in the area of products and services for Information Technology.

As of December 31, 2018, the Domestic Business Unit was organized as follows:



(*) Main subsidiaries: TIM S.p.A., INWIT S.p.A., Telenergia S.p.A., Telecontact Center S.p.A., Olivetti S.p.A., HR Services S.r.l, TIMVision and Noverca.

The principal operating and financial data of the Domestic Business Unit are reported according to the following two cash-generating units ("**CGU**"):

- **Core Domestic**: includes all telecommunications activities within the Italian market. The sales market segments established on the basis of a "customer-centric" organizational model are as follows:
  - **Consumer**: the segment consists of all fixed and mobile voice and internet services as well as products managed and developed for individuals and families and of public telephony; customer care, operating credit support, loyalty and retention activities, sales within its assigned area, and administrative management of customers; the segment includes the companies 4G Retail, Persidera and Noverca;
  - **Business**: the segment consists of voice, data, and internet services and products, and ICT solutions managed and developed for small and medium-size enterprises (SMEs), Small Offices/Home Offices (SOHOs), Top customers, the Public Sector, Large Accounts, and Enterprises in the Fixed and Mobile telecommunications markets; the segment includes the companies: Olivetti, Telsy, Trust Technologies and Olivetti Scuola Digitale (formerly Alphabook);
  - **Wholesale**: the segment consists of the management and development of the portfolio of regulated and unregulated wholesale services for Fixed and Mobile telecommunications operators in the domestic market and Open Access operations connected with delivery and assurance processes for customer services. The segment includes the companies: TN Fiber, Flash Fiber, TI San Marino and Telefonia Mobile Sammarinese;
  - **Other—INWIT S.p.A. and support structures:** includes:
    - **INWIT S.p.A.**: since April 2015, the company has been operating within the Operations area in the electronic communications infrastructure sector, specifically relating to infrastructure for housing radio transmission equipment for mobile telephone networks for TIM and other operators;
    - **Other Operations units**: covering technological innovation and the processes of development, engineering, building and operating network infrastructures, IT, real estate properties and plant engineering;

- **Staff & Other**: services carried out by Staff functions and other support activities performed by minor companies of the Group, also offered to the market and other Business Units.

- **International Wholesale – Telecom Italia Sparkle group**: includes the activities of the Telecom Italia Sparkle group, which operates in the market for international voice, data and internet services for fixed and mobile telecommunications operators, ISPs/ASPs (Wholesale market) and multinational companies through its own networks in the European, Mediterranean and South American markets.

❖ Marketing Channels and Distribution

At December 31, 2018, as a result of the customer-centric approach, TIM utilized the following sales structure for each of its customer segments:

Distribution

The sales structure is organized according to a vertical, multi-channel approach, in which different types of distribution channels are specialized for different customer segments of the market, based on clusters of customers and services. This approach enhances the focus and customization of our products.

- ***Consumer***

  Consumer customers are managed by several channels focused on volume and value acquisitions, including:

  - the "Push" channel consisting of an outbound telephone channel called "Telesales" with a network of 30 partners having a total of approximately 3,500 operators and the "Agent" channel with approximately 90 Direct Agents and a network of 80 partners with approximately 2,500 sales agents;
  - the "Pull" channel: consisting of the retail network of shops, dealers and large retailers, amounting to a total of approximately 5,000 retail points of sale (at December 31, 2018). Points of sale are geographically widespread and they are of different types: direct (flagship stores and 4G mall stores); franchisee; monobrand; multibrand; organized and specialized large-scale distribution.

  In addition to these partners, distribution is also carried out through the "Public Telephone" channel, consisting of 6 technical partners that provide maintenance and other related services.

- ***Business***

  Commercial customers are managed by a single sales unit that addresses customers through both Direct and Indirect Sales. The Sales channel is organized into five different segments. One of these segments is aimed to the main customers, which includes the most important Private enterprise and the Public central government and is managed only through the Direct Sales Channel. The remaining four manage strategic, large, medium and small regional customers and include both Direct and Indirect Sales Channels.

  - ***Indirect Sales Channel***

    The company distribution channels include:

    - Channel "BP-Business Partner" (about 60 entrepreneurs with about 100 agencies spread over 4 territorial areas): a network of agents focused on standard offers (small market) with about 2,200 agents (1,300 FTE);

      Features:

      - The agencies are remunerated on the basis of a commissions plan based on an ordinary remuneration and extra remuneration for the achievement of specific sales targets;
      - The agencies have a mandate to acquire new customers and develop the customer base;
      - Each agency is exclusively assigned a cluster of value customers (2% of the customer base) on which to develop and maintain.
      - Outbound Call Center: 8 partners focused on specific activities of propaganda and customer loyalty;
      - Senior Agent: 140 agents focused on medium-sized private clients;

- Shops: some specific shops (about 900 out of the 2,400 total) that offer products and business assistance.

- **Direct Sales Channel**

  As of the end of 2018 more than 1000 sales staff have been working on a individually dedicated customer portfolio to manage and develop, supported by pre sales and post sales teams, according to a strong growth plan of direct sales coverage of the market, that is expected to scale up performances through increased proximity and quality of the relationship. The main activities include supporting the digital transformation journey of private enterprises and public administrations, offering the whole range of services (fixed and mobile voice and data, ICT services and products) and developing custom solutions and projects.

- ***Wholesale***

  The Wholesale ("W") department manages relationships with approximately 400 other telecommunications operators (Wholesale Market), who can be both customers and competitors of TIM. These customers purchase TIM network and professional services to build services for their own customers.

  In order to ensure complete management of the relationship with customers, the Wholesale department is organized to cover all stages of the process:

  - analysis of technological innovation, for New Products and Service Innovation Marketing;
  - analysis of business evolution in the wholesale market, for Marketing development;
  - definition of the offer for wholesale regulated services, such as Interconnection, Data Services, Access Services; the offer is developed by the marketing group according to conditions and rules set by National and European Authorities;
  - sales through direct vendors, which are supported by presales and project managers; they are organized into two Commercial Local Areas: one for the North of Italy and another one for Centre and South of Italy;
  - contracts definition and disputes solution through specialized personnel; and
  - billing, credit and administrative activities, revenue integrity control.

  The Wholesale department is set up as an independent department, which allows TIM, along with other conditions (accounting separation, compliance with the resolutions of the Authorities) to manage transparency and fairness in its relationship with other operators, as well as compliance with all regulatory requirements.

❖ CUSTOMER AND LINES

The table below sets forth, for the periods indicated, certain statistical data of the Domestic Business Unit:

	As of and for the years ended December 31,		
	2018	2017	2016
DOMESTIC FIXED			
Physical accesses (thousand)(1)	18,212	18,995	18,963
Of which retail physical accesses (thousand)	*10,149*	*11,044*	*11,285*
Broadband accesses in Italy at year-end (thousand)(2)	11,184	10,154	9,206
Of which retail broadband accesses (thousand)	*7,575*	*7,641*	*7,191*
Network infrastructure in Italy:			
access network in copper (millions of km—pair, distribution and connection)	114.4	114.6	114.4
access and carrier network in optical fiber (millions of km—fiber)	16.4	14.3	12.6
Total traffic:			
Minutes of traffic on fixed-line network (billions):	58.3	64.0	69.1
Domestic traffic	*46.2*	*50.7*	*55.6*
International traffic	*12.1*	*13.3*	*13.5*
Broadband traffic (PBytes)(3)	9,394	7,848	5,774
DOMESTIC MOBILE			
Number of lines at year-end (thousand)(4)	31,818	30,755	29,617
Change in lines (%)	3.5	3.8	(1.3)
Churn rate (%)(5)	26.3	26.2	22.8
Total traffic:			
Outgoing retail traffic (billions of minutes)	57.0	51.4	44.9
Incoming and outgoing retail traffic (billions of minutes)	85.4	78.1	69.6
Mobile browsing volumes (PBytes)(6)	686.8	417.5	258.5
Average monthly revenues per line(7) (euro)	11.5	12.5	12.4

(1) Excludes full-infrastructured OLOs and FWA-Fixed Wireless Access.

(2) Excludes OLO LLU and NAKED, satellite, full-infrastructured and FWA Fixed Wireless Access.

(3) DownStream and UpStream traffic volumes.

(4) The figure includes the SIM cards used on platforms for delivering Machine-to-Machine services.

(5) The data refers to total lines. The churn rate represents the number of mobile customers who discontinued service during the period expressed as a percentage of the average number of customers.

(6) National traffic, excluding roaming.

(7) The values are calculated on the basis of revenues from services (including revenues from prepaid cards) as a percentage of the average number of lines.

❖ MAIN CHANGES IN THE REGULATORY FRAMEWORK

For a description of the main regulatory events that occurred in 2018 and which may have a significant impact on the operation of the Domestic Business Unit, please see "Item 4. Information On The TIM Group—4.3 Regulation".

❖ COMPETITION

The market

During 2018, the Italian TLC market was affected by a downturn due to tougher competition in the mobile sector.

The expansion of broadband and ultra-broadband has been the main driver of market growth, helping to open up new opportunities for telecommunications providers to develop convergent offers that bundle together TLC services with Media & Entertainment services, IT services and Digital services.

The Italian telecommunications market has always been highly competitive; in particular core competition with other operators in the sector is still the factor with the greatest impact on market trends. Telecommunications

operators must also face the challenges from Over the Tops (OTT) and device manufacturers, that operate in the new digital world using completely different assets and competitive strategies to TLC players.

The traditional business models of the various market players are, therefore, changing to exploit new opportunities and meet the challenges posed by the new entrants:

- in the Media & Entertainment segment, as the web takes on growing importance as a complementary distribution platform, OTTs, telecommunications providers and consumer electronics manufacturers are acquiring an increasingly major role;
- in the Information Technology market, the decline in traditional revenues is driving the various players towards cloud computing, with the goal of protecting their core business. Telecommunications providers are strengthening in this sector, including through partnerships;
- Consumer Electronics manufacturers are developing services that can be accessed through the Internet by leveraging handset ownership and user experience management, breaking the relationship between customers and TLC providers;
- OTTs have been leading the transformation in how TLC services are used (including voice services), increasingly integrating them with Media & Entertainment, IT and new Digital services.

With regard to the current positioning of telecommunications providers in converging markets, on the other hand, as partially described above, the following is taking place with different levels of progress:

- development of new Media & Entertainment services (TV, Music, Gaming) and new Digital services (Smart Home, Digital Advertising, Mobile Payment-Digital Identity);
- development of Innovative Services in the IT market, particularly Cloud services.

During 2018, the bidding for the award of frequencies for 5G services took place, which led to an overall outlay for telecommunications companies of over 6.5 billion euros, well above the minimum bid price.

TIM and Vodafone were awarded the largest part of the spectrum: 10+10 MHz at 700 MHz, 80 MHz in the 3.6-3.8 GHz band respectively (the most requested to launch good-quality 5G services) and 200 MHz in the 27 GHz band, thereby reinforcing our competitive positioning in terms of bandwidth owned and quality of service offered.

Based on performance capabilities in terms of speed, latency and number of connected devices, 5G is an opportunity for telecommunications companies with the necessary bandwidth to open new vertical markets (e.g., automotive, smart agriculture, logistics, cloud robotics), provide new services, commence new production processes and increase the efficiency of optimized product management.

Competition in Fixed-Line Telecommunications

The fixed-line telecommunications market has continued to see a decline in access and voice revenues, while broadband and ultra-broadband revenues have shown continuous growth. In recent years, service providers have concentrated mainly on expanding the penetration of broadband and ultra-broadband services and defending Voice revenues by introducing bundled voice, broadband and service deals in a highly competitive environment with consequent pricing pressure.

Deals and offers are also becoming more competitive thanks to the consolidation, among competitors, of an approach based on control over infrastructure (above all, Local Loop Unbundling (LLU), as well as Fiber to the Cabinet (FTTC) networks). The main fixed-line service providers are also offering mobile services, also as Mobile Virtual Operators (MVOs).

As concerns competition in infrastructure, two providers—Open Fiber (an ENEL Group company) and Infratel (controlled by the Ministry of Economic Development)—presented plans for the development of their own optic fiber networks as alternatives to the TIM network, which respectively target major Italian cities and areas of market failure.

Open Fiber announced a plan to invest 3.8 billion euros in the development of Fiber to the Home (FTTH) in 271 large Italian towns by 2022, reaching around 9.6 million homes.

Open Fiber obtained 3.5 billion euros in funding in July 2018. Following the receipt of such funding, the development of the Open Fiber network was stepped up considerably, opening up to 71 Italian towns (as of January 2019), including many major Italian cities, such as Milan, Turin and Bologna, where "Metroweb" (acquired in December 2016) had previously expanded, as well as Bari, Cagliari, Catania, Naples, Padova, Perugia, Venice, Genoa, Palermo and Florence, and smaller towns that are mainly satellite areas of Milan, Turin and Bologna.

In the meantime, according to media reports, our main competitors in the TLC retail market have signed an agreement with Open Fiber to link their new ultra-broadband customers onto its network, where available.

As concerns areas of market failure—the so-called "white areas" in the C and D clusters of the government's Ultra-Broadband Plan—Infratel held three public calls for tenders over the last three years for the development of a UBB network to deliver services to around 7,500 municipalities across 19 regions.

- In the first call for tenders, Open Fiber won all five of the lots offered in the six regions involved (Lombardy, Emilia Romagna, Veneto, Tuscany, Abruzzo and Molise), covering around 3,000 municipalities.
- In the second call for tenders, Open Fiber won all six of the lots offered in the ten regions involved (Piedmont, Valle d'Aosta, Liguria, Friuli Venezia Giulia, the Autonomous Province of Trento, Marche, Umbria, Lazio, Campania, Basilicata and Sicily), covering around 3,700 municipalities.
- In the third call for tenders, Open Fiber won all three lots in the three regions involved (Apulia, Calabria and Sardinia) covering around 880 municipalities.

In January 2019, there were approximately 1,174 work sites open for the first two Infratel/Open Fiber contracts, of which 977 for fiber optic connections and 197 for wireless connections (FWA).

Therefore the development of Open Fiber Plans—both in major Italian cities and market failure areas—will drive a significant shift in infrastructure competition, with the development of various competitive dynamics depending on the overlap and reach of available ultrabroadband infrastructure:

- areas with two FTTH networks overlapping FTTC networks;
- areas with a single FTTH network overlapping FTTC networks;
- areas with FTTH networks overlapping ADSL networks;
- areas with FTTC networks overlapping ADSL networks.

Competition in the Italian fixed-line telecommunications market is also characterized by the presence of other service providers besides TIM, such as Wind-Infostrada, Fastweb, Vodafone, and Tiscali, which have business models focused on different segments of the market. In December 2018, fixed accesses in Italy were estimated to be around 20.3 million (including OLO Infrastructured and FWA-Fixed Wireless Accesses) down slightly on the previous year. Competition in the access market led to a gradual reduction in TIM's market share.

As concerns the Broadband market, at December 31, 2018, the number of fixed-line broadband (including both broadband and ultrabroadband customers) customers in Italy was estimated to have reached a penetration rate of approximately 86% of all fixed-line access. The spread of broadband continues to be driven by the penetration of computers and other enabled devices (such as Smart TVs), but also by growing demand for fast connections and access to new over-IP services that are becoming increasingly widespread (Media & Entertainment, IT and Digital services).

Competition in Mobile Telecommunications

The mobile market has continued to see the rationalization of second and third SIM cards for human communications, while sales of SIM cards for machine to machine (M2M) communications are growing.

Moreover, growth in mobile broadband customers has continued thanks to the high penetration rate of LTE on mobile lines, especially as a result of the increasing spread of smartphones.

Alongside innovative services that have already caught on and are under full-scale development, as in the case of mobile apps, there are other market environments, associated with the development of mobile broadband, with major potential for growth in the medium term, such as the Internet of Things and mobile payment.

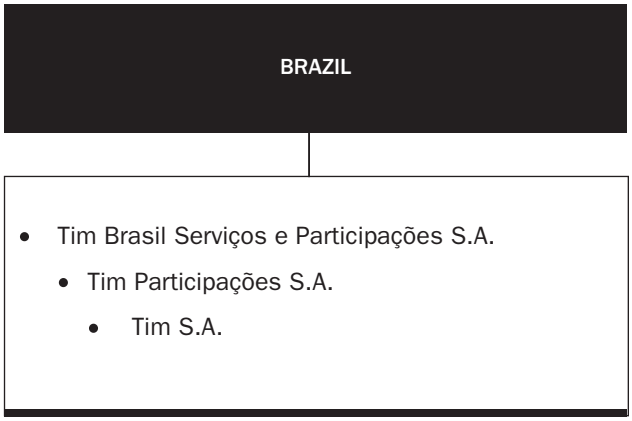
The competitive scenario on the Italian mobile telecommunications market in 2018 was marked by the entry of the French operator Illiad, that launched its own service in May, becoming the fourth infrastructured operator in Italy, alongside TIM, Vodafone and WindTre. With a particularly aggressive price and data volume offering, Illiad has rapidly won over customers and consequently gained a market share to the detriment of other infrastructured operators, mainly WindTre and Vodafone, while TIM has shown a greater resilience, thanks also to the contribution from the second brand virtual operator, Kena Mobile, launched during 2017. To best respond to the competitive threat of Illiad, Vodafone also launched its own low-cost operator in June 2018, ho.mobile.

At the same time, mobile virtual operators (MVO), of which PosteMobile is the most important player, also reported a growth trend, taking market share away from infrastructured operators.

This tougher competition following Illiad's entry to the market resulted in a new drop in the spend on services, after several years of relative stability.

4.2.2 BRAZIL

The **Brazil Business Unit** (Tim Brasil group) provides mobile telephone services using UMTS, GSM and LTE technologies. Moreover, the Tim Brasil group offers fiber optic data transmission using full IP technology, such as DWDM and MPLS and residential broadband services.



At the end of 2018, Tim Brasil group's coverage reached 93% of the urban population with its 4G network, achieving 3,272 cities with such technology, a 9.0% increase when compared with the same period of 2017.

TIM's strategy is to fulfill consumers' needs by understanding what they value and earn their trust based on three pillars: (i) innovation, which is already in the company's DNA and will continue as a priority, with new plans, offers, partnerships and technologies; (ii) quality, as TIM has worked to become a leader in 4G coverage and maintain strong investments in infrastructure to deliver the best to its customers and be prepared for the future; (iii) user experience, which, in addition to the two other pillars, is important to establish a new relationship with customers and act to give every client the best caring experience, great services and a transparent relationship with the company.

The table below sets forth the number of mobile lines of the Brazil Business Unit:

	As of and for the years ended December 31,		
	2018	2017	2016
Number of lines at year-end (thousands)(*)	55,923	58,634	63,418
MOU (minutes/months)(**)	123.4	109.7	116.6
ARPU (Reais)	22.4	20.2	18.0

(*) Data includes company lines (active SIM cards used by the TIM Brasil group and its employees).

(**) Net of visitors.

❖ Marketing

With the rapid changes in the consumption of telecommunications services by Brazilian users, Tim Brasil continued its efforts to innovate its offerings for all customer segments (Postpaid, Control and Prepaid) bringing significant changes in all segments, mostly by providing to its customers substantial internet packages with social media and digital services on top of unlimited off-net calls.

This change aims to help Tim Brasil grow its postpaid base, focusing in lock-in offers to increase loyalty and drive churn reduction, and also to protect and increase the value of the prepaid base (segment which the Company maintain its leadership) by providing more complete voice and data offers, at reasonable prices, which, based on a robust 4G network, driven the traffic on such technology to achieve 76% of Tim Brasil total traffic.

Those efforts are producing important results that can be seen by the migration to more expensive packages (from prepaid to control plans and also from control plans to postpaid ones), with a resilient combined postpaid ARPU, while the prepaid segment shows increasing commitment with average recharges growth and stable ARPU.

❖ Distribution

As of December 31, 2018, we had more than 11.5 thousand points of sale through premium shops and dealers (exclusive or multi-brand) and consolidated partnerships with large retail chains. This figure includes Tim Brasil's 159 own stores. In addition to these retail stores, Tim Brasil customers have access to prepaid phone services through supermarkets, newsstands, and other small retailers, totaling more than 332 thousand points of sale throughout Brazil.

For the corporate market, Tim Brasil has more than 429 third-party business partners and 87 employees focused on serving small and medium-size companies and a direct sales force team of 98 employees focused on large companies.

In order to serve the customer base of over 55.9 million customers, Tim Brasil maintains 10 customer care centers. Moreover, Tim Brasil has continuously invested in alternative customer service channels, developing solutions based on interactive voice response and self-service and mobile applications for iOS and Android.

❖ Main changes in the regulatory framework

For the main regulatory developments which occurred in 2018 that may have an economic impact on the Brazil Business Unit, please see "Item 4. Information On The TIM Group—4.3 Regulation".

❖ Competition

At the end of 2018, the Brazilian mobile market reached 229.2 million lines 7.3 million lines (or 3.1%) lower than at the end of 2017. Consequently the Brazil Business Unit churn rate in 2018 was 47.2% (53.2% in 2017).

4.3 REGULATION

As a telecommunications operator, the TIM Group is subject to sector-specific telecommunications regulations, general competition law and a variety of other regulations, including privacy and security, which can have a direct and material effect on the Group's business areas.

This section describes the legislative framework and the recent legislative key developments.

4.3.1 THE EU REGULATORY FRAMEWORK

TIM's operations within the European Union ("**EU**") are subject to the EU regulatory framework for electronic communications networks and services, which includes directives, regulations, recommendations and communications. As a Member State of the EU, Italy is required to transpose directives issued by the EU into national legislation. The regulations adopted by the European Commission ("**EC**") are applicable and binding on each Member State without the need of further national implementation. Recommendations and communications, on the other hand, are not legally binding although they have to be taken into account by each Member State.

National Regulatory Authorities ("**NRAs**") are independent bodies tasked with regulating and supervising the telecommunications sector and compliance with the EU framework in each Member State. In Italy, this body is "Autorità Garante per le Comunicazioni" ("**AGCom**") while the Ministry of Economic Development ("**MISE**") is responsible for national broadband plan, spectrum and numbering management, integrity and security of the network.

Until December 19, 2018 the EU Regulatory Framework has been based on five directives ("Framework", "Access and Interconnection", "Authorization", "Universal Service and Users' Rights" and "Privacy and Data Protection" together, the "**Directives**") that regulate all forms of fixed and wireless telecommunications and data transmission. In Italy, the Directives have been transposed into the "Codice delle comunicazioni elettroniche" (Electronic Communications Code – **ECC**) which is currently in force.

On December 20, 2018 Directive 2018/1972 establishing the European Electronic Communication Code (the "**EECC**") entered into force. The Directive reviews and combines in one document the "Framework", "Access and Interconnection", "Authorisation" and "Universal Service and Users' Rights" Directives (the revision of the Privacy and Data Protection Directive, the so-called e-privacy Directive, is ongoing under separate proceedings). On the same date, Regulation 2018/1971 also entered into force, reviewing the former BEREC (Body of European Regulators for Electronic Communications) Regulation (EC) 1211/2009. The transposition of the EECC into the law of each Member State must occur by December 21, 2020.

The EECC includes measures to promote wholesale-only models of investments and stimulate investments in very high capacity network (VHCN), new rules on spectrum (e.g., minimum license duration) to improve certainty on investment return, changes to regulation of services, introducing more level playing field between telecom operators and new over-the-top-players (OTTs), and the introduction, in the scope of Universal Service Obligation (USO), of the affordability for consumers (with low income or special social needs) of adequate broadband internet access service and voice communications services at least at a fixed location.

In addition, the BEREC Regulation, by amending Regulation (EU) 2015/2120, introduces price caps to be applied from May 15, 2019 on Intra-EU international fixed and mobile calls (19c€/min) and SMS (6c€/SMS) for consumers.

A Recommendation issued by the EC on "relevant product and service markets susceptible of ex ante regulation" (Commission's Recommendation on relevant markets) completes this set of legal instruments with the definition of a list of relevant markets "whose characteristics may be such as to justify the imposition of regulatory obligations". The Recommendation currently in effect (no. 2014/710/UE) was published on October 9, 2014, following updates in 2003 and 2007. The number of relevant markets subject to ex ante regulation has been reduced over time from 18 to 4, following the growth of the competition in the whole sector (see "Wholesale Market Analyses").

In 2010, the EC adopted a Communication, the "Digital Agenda for Europe" (the "**DAE**"), setting forth long-term EU strategies for Broadband. The DAE sets non-binding targets on broadband coverage and take-up to be achieved by 2020:

- Broadband coverage at 30 Mbit/s or more for 100% of EU citizens; and
- 50% of EU households having subscriptions above 100Mbps.

In September 2016, through the Gigabit Society Communication, the EC set the following (not binding) additional targets for the year 2025:

- connectivity of 1 Gbps (upload and download) for all socio-economic entities (i.e. schools, businesses, public administration, etc.);
- connectivity of 100 Mbps download for all European households and businesses; and
- uninterrupted 5G coverage for all urban areas and major terrestrial transport routes (as an interim target, 5G should be commercially available in at least one major city in each EU Member State by 2020).

1. International Roaming

Intra-EU roaming services are regulated by the roaming Regulation 531/2012 (the "**Roaming III Regulation**"), as amended by the Telecom Single Market Regulation 2015/2120 (the "**TSM Regulation**") which provides for the abolishing of any roaming service surcharge on top of domestic service prices subject to "fair use" limits to avoid abuses, starting from June 15, 2017 (Roam Like at Home—RLAH regime).

For intra-EU traffic exceeding the fair use limits, operators are allowed to levy a surcharge on top of domestic tariffs. Such a surcharge is capped at the following wholesale caps, established by the Regulation 2017/920, which reviews the Roaming III Regulation wholesale caps.

Voice	**3,2 eurocents/min.**
SMS	**1 eurocent/min.**
Data	7,7 euro/GB from 15/06/17
	6,0 euro/GB from 01/01/18
	4,5 euro/GB from 01/01/19
	3,5 euro/GB from 01/01/20
	3,0 euro/GB from 01/01/21
	2,5 euro/GB from 01/01/22

2. Net Neutrality

The TSM Regulation introduces new rules on Net Neutrality, which have applied since April 2016. In particular, the TSM Regulation:

- establishes the right of end-user access to distribute information and content, use and provide applications and services and use terminal equipment of their choice and forbids internet service providers from blocking or slowing down specific content, applications or services, except in a very limited set of circumstances;
- allows reasonable traffic management aimed at improving the quality of the network based on objectively different technical quality of service requirements for specific categories of traffic. However, such traffic management must be transparent, non-discriminatory and proportionate and it must not be based on commercial considerations;
- allows operators to offer services, other than internet access services, that are optimized for specific content, applications or services only if the network capacity is sufficient to provide them in addition to any internet access services provided and the offering of such services is not to the detriment of the availability or general quality of internet access services for end-users; and

- allows commercial practices such as "zero rating"[2], subject to monitoring by the National Regulatory Authority.

The TSM Regulation also places additional transparency obligations on providers of internet access services in addition to those already included in the Electronic Communications Regulatory Framework.

3. Privacy and Data Protection

TIM must comply with the EU Regulation 2016/679, "General Data Protection Regulation" ("GDPR") since May 2018. The new regulation has adopted a risk based approach, allowing a higher flexibility for service providers to process personal data, while ensuring a high level of protection of personal data of individuals. The GDPR introduces administrative fines of up to 4% of an undertaking's annual global turnover for breaching the new data protection rules.

TIM has put in place a specific project to carry out all the activities needed to ensure its compliance with the new rules introduced by the GDPR.

While the GDPR is a horizontal regulation, applying to all categories of providers, TIM must comply also with the complementing sectorial rules (Directive 2002/58/EC, the so called "e-Privacy Directive"), currently under revision, which imposes additional limitation to the data processing by operators of electronic communications services. The EC proposal aligns the fines for non-compliance to the GDPR's.

4.3.2 The Italian Regulatory Framework

The main legal references for the electronic communications sector in Italy is the "Electronic Communications Code" ("ECC"), which transposed into national law the EU Access, Authorization, Framework and Universal Service directives. Moreover, there are other laws affecting TIM's business which govern non-sectorial areas such as consumer, data and security protection and laws which govern specific aspect of communication sector such as Legislative Decree n. 33/2016 (implementing 2014/61/UE Directive), setting forth measures for costs reductions in UBB networks installations and promoting the use of existing infrastructures.

With the law no. 119/2018 dated December 18, 2018, the Government amended the ECC introducing the power for AGCom to define adequate measures of investment remuneration to incentivize the merger of different access networks put under the control of a non-vertically integrated subject offering only wholesale network services.

4.3.3 Market analyses

The EU regulatory framework requires the National Regulatory Authorities to carry out market analyses before imposing obligations on individual operators having a Significant Market Power ("**SMP**") according to the specific EU guidelines.

A description of the Italian wholesale market analyses is summarized below together with the main recent developments regarding the electronic communications markets.

❖ *Wholesale fixed access markets*

In December 2015 (Decision n. 623/15/CONS), AGCom defined the rules for the access to TIM's copper and fiber fixed networks for the years 2015-17.

The main regulatory measures are the following:

- confirmation of the national scope of remedies imposed on TIM;

[2] Zero-rating (also called toll-free data or sponsored data) is the practice of mobile network operators (MNO), mobile virtual network operators (MVNO), and Internet Service Providers (ISP) not to charge end customers for data used by specific applications or internet services through their network, in limited or metered data plans. It allows customers to use provider-selected content sources or data services like an app store, without worrying about bill shocks, which could otherwise occur if the same data was normally charged according to their data plans and volume caps. This has especially become an option to market 4G networks, but has also been used in the past for SMS or other content services.

- substantial upholding of Local Loop Unbundling ("**LLU**") prices together with a reduction of Sub Loop Unbundling ("**SLU**") and Virtual Unbundling Local Access ("**VULA**" prices);
- disaggregation of ancillary service provision for provision and maintenance (i.e. delivery and assurance) for LLU and SLU lines;
- introduction of new equivalence measures, according to the New Equivalence Model (NEM);
- stricter constraints on the quality of wholesale services (SLAs and penalties);
- commitment to define switch-off rules in case of decommissioning of TIM local exchanges of the copper access network:
  - 5 years for the switch-off of local exchanges where LLU is available;
  - 3 years for local exchanges where LLU is not available, or for local exchanges where LLU is available as long as TIM provides competitors with a service that is technically equivalent to copper LLU for at least 2 years after the switch-off.

The NEM, through the reorganization of both assurance and delivery processes, aims to improve end-to-end performance and to remove any possible internal-external process asymmetries between TIM Retail and the alternative operators (such as differences in internal and external reasons for "refusal" of delivery orders, provision times, customer data bases and order workflows) that could produce potential discrimination between TIM retail and the alternative operators in the conditions of provision of the wholesale services.

The NEM implementation was completed in April 2017 and the migration process of all operators to the New Delivery Systems was completed in July 2018.

With Decision 623/15/CONS, AGCom also asked TIM to present a proposal to introduce a disaggregation model for the delivery and assurance activities of the local loop and sub-loop unbundling lines. TIM's proposal (sent to AGCom in February 2016 and submitted to public consultation by AGCom in April 2016) is based on the extension of the "System Unico" (i.e., the recourse to external companies by the competing operators) to the above-referenced delivery and assurance activities. In August 2017, with Decision 321/17/CONS, AGCom defined the technical and organizational conditions of the disaggregation model. According to the approved model, alternative operators can autonomously choose whether TIM or external companies have to carry out the above mentioned ancillary activities for LLU and SLU services. Moreover, the alternative operator can make direct arrangements with the external companies regarding a series of activities, such as the contact policy, the economic conditions for the management of the appointments, etc. The main Italian operators started to apply the disaggregation model between December 2018 and February 2019.

On February 20, 2017 AGCom launched the fourth round of the access markets analysis (Decision 43/17/CONS) to review the obligations and economic conditions of the wholesale access services for the period 2018-2021. The markets analysis also takes into account TIM's voluntary legal separation project in relation to its fixed access network.

On March 6, 2018, TIM's Board of Directors approved the project to voluntarily separate the fixed access network through the creation of a legal entity (NetCo) separate from the rest of the company (ServCo). The new company (NetCo), 100% controlled by TIM, will have its assets (access network infrastructure, from the exchange to customers' homes, as well as buildings, electronic equipment and IT systems) and the personnel necessary to provide wholesale services independently. The model is intended to guarantee full equality of treatment, thanks to a single access point; a "one-stop shop" for regulated and unregulated wholesale services for all operators, including TIM.

On March 27, 2018, TIM notified to AGCom the voluntarily separation project and on June 6, 2018, AGCom found the project admissible. Therefore, pursuant to Article 50 ter of the Electronic Communications Code, AGCom started a coordinated analysis of the different markets related to the access network to assess the effect of the project on existing regulatory obligations.

From January 18 to March 4, 2019, AGCom carried out a public consultation (Decision 613/18/CONS) on the outcome of the coordinated markets analysis.

In the text under consultation, AGCom gives a positive evaluation of TIM's access network separation project since it strengthens the equivalence conditions and softens the competitive issues found in the previous market analysis. Anyhow, the Authority deems that some vertical integration issues remain (Netco is fully controlled by TIM and ServCo operates directly in the retail market and indirectly in the wholesale market) as well some risks of anticompetitive conduct.

With reference to the separation project, AGCM propose to:

1) adequate the accounting separation obligations to the new organization;

2) repeal the obligation to inform AGCom about contracts concluded in the scope of public tenders to allow AGCom to verify the replicability of the fixed access offers;

With reference to the other aspects of market analysis, AGCom makes the following proposals:

- TIM confirmed as having significant market power (SMP) in the access markets on the whole national territory with the exclusion of the city of Milan, where the ex-ante regulation has been withdrawn;
- withdrawal of the cost orientation obligation on wholesale prices (except SLU) in the cities clusters considered as "competitive" (up to 45 in the first year with potential annual update on the basis of the evolution of alternative infrastructures and markets); these wholesale prices are subjected to an ex-ante replicability test;
- 2018 wholesale monthly rentals for copper and fiber equal to the ones set for 2017;
- gradual increase of full unbundling (ULL) and bitstream over copper rates for the period 2019-2021;
- stability of the sub loop unbundling (SLU) rates for the period 2019-2021;
- gradual decrease of the fiber access rates (VULA FTTC and FTTH) and differentiation of the price of the band for the period 2019-2021 depending on whether the access line is over copper network or NGA;
- reduction of decommissioning notice times, whose duration is linked to the NGA networks coverage (FWA technology included) in the area where the switch is located;
- vectoring usage allowed in the FTTC cabinets where the SLU is not employed by alternative operators;
- withdrawal of the current asymmetries in the transition procedures to another operator between TIM's return process and switching from TIM to alternative operators.

Proposed wholesale regulated prices (€ / line / month)

	2018	2019	2020	2021
LLU (copper local loop unbundling)	8.61	8.61	8.79	8.90
SLU (sub loop unbundling)	5.30	5.30	5.30	5.30
WLR POTS (Wholesale Line Rental POTS)	11.06	10.73	10,91	11,02
WLR ISDN BRA (Wholesale Line Rental—ISDN BRA)	13,67	13.34	13.52	13.63
Bitstream shared (copper)	4.29	4.35	4.43	4.52
Bitstream naked (copper)	12.46	12.45	12.58	12.69
VULA FTTC naked (30 Mbps)	13.27	13.69	13.21	12.50
VULA FTTC naked (>50 Mbps)	15.02			
VULA FTTH naked (consumer)*	17.25	15.73	15.50	15.20
VULA FTTH naked (business)*		47.19	46.49	45.61

* *price of "100/10 Mbps" offer until 2018; from 2019 onwards AGCom proposes differentiated prices for residential and business*

AGCom's final decision is expected in June-July 2019, after the end of the national consultation and the comments by the European Commission and AGCM.

➢ *Terminating segment of leased lines*

In July 2015, the Italian NRA approved the decision on terminating segment of leased lines services, essentially confirming the rules laid down at the end of the previous round of market analysis. In particular, regarding

Synchronous Digital Hierarchy / Plesiochronous Digital Hierarchy ("**SDH / PDH**") leased lines with capacities less than or equal to 155 Mbit/s and Ethernet over SDH leased lines, TIM is subject to a network price cap (for Access rentals CPI-6%, for Internet Protocol—"**IP**"—transport -8.6 %) for 2015, 2016 and 2017. Regarding SDH / PDH leased lines with capacities greater than 155 Mbit/s and Ethernet over optical fiber leased lines, as well as ancillary services, prices are to be oriented to the costs resulting from the regulatory cost accounting.

On February 13, 2017, AGCom began the fourth cycle of market analysis (Decision 44/17/CONS) and on January 16, 2018, AGCom published the public consultation (Decision 507/17/CONS).

AGCom proposes to:

- confirm the use of the network cap for the definition of the prices of wholesale services of terminal segments of leased lines in SDH / PDH technology and in Ethernet over SDH technology, for the years 2018-2020;
- confirm the invariance of the prices of interconnection links for the years 2018—2020, placing them on equal footing to the prices approved for 2013 and confirmed for the years 2014-2017;
- confirm the BU-LRIC model for the evaluation of the prices of ancillary services and of the optical fiber Ethernet circuits, including the backhauling link (fixed annually in the approval process of the relevant reference offer); and
- remove the imposition of access obligations, for new activations, for the following technologies: i) analog terminating circuits; ii) PDH digital terminating circuits with speeds ranging from 1.2 kbps to 19.2 kbps; iii) Ethernet terminating circuits over SDH (all speeds); iv) Ethernet over SDH interconnection flows (all speeds).

➢ *Wholesale fixed interconnection markets*

In October 2016, AGCom issued the final decision of the third round of analysis of fixed voice interconnection market, specifically fixed call termination, origination and transit services (Decision 425/16/CONS).

AGCom decided to:

- confirm SMP designation for TIM in the origination market, although this market has been removed from the EC Recommendation;
- set stable fixed call termination rates of 0.043 eurocents/min for TIM and alternative network operators valid until the end of 2018, and 0.041 eurocents/min from January 1, 2019;
- exclude from the scope of price regulation the termination rates of calls originated outside the European Economic Area ("**EEA**"), including the EU member States and Iceland, Liechtenstein and Norway;
- remove the existing obligations imposed on TIM in the wholesale market for district-level transit; and
- remove the obligation imposed on TIM to notify its retail call services that rely on the regulated interconnection services 30 days before the commercialization.

➢ *Wholesale mobile markets*

On January 22, 2019 AGCom published the final decision on the fifth round of mobile termination market analysis (Decision 599/18/CONS). AGCom determined to:

- identify the twelve operators who provide or are about to provide mobile voice call termination services (MNOs, Iliad included, and Full MVNOs) as having Significant Market Power (SMP);
- confirm the implementation of the cost model specified in Decision 60/11/CONS for the setting of termination rates for the period 2018-2021, also by setting symmetric tariffs for all SMP operators (0.98 c€ in 2018, 0.90 c€ in 2019, 0.76 c€ in 2020, 0.67 c€ in 2021) on the basis of a WACC equal to 8.55%;
- enforce the price control obligation for the provision of interconnection kits to all SMP operators with retroactive effect from 2018;
- withdraw the cost accounting obligation enforced on TIM, Vodafone and Wind-Tre;
- confirm the absence of a termination price control obligation for calls originating outside the European Economic Area (AEE); however, operators cannot apply higher termination rates than those applied to Italian operators by extra-AEE operators whose tariffs are regulated by the relevant Authorities.

4.3.4 Retail Markets

❖ ***Retail Offers***

Despite AGCom assessed retail fixed markets are no longer susceptible of ex ante regulation, AGCom confirmed that TIM is subject to the following obligations regarding its publicly available stand-alone and bundled retail access offers on fixed network: a 30-day notification prior to the commercial launch and an economic and technical replicability assessment by AGCom (i.e. margin squeeze test and availability of adequate wholesale inputs); if the offer does not meet the replicability requirement, TIM must revise the retail offer conditions.

In the draft analysis of wholesale fixed access markets, put under national consultation on January 18, 2019 with Decision 613/18/CONS, AGCom proposed to confirm the economic replicability obligation on TIM's copper and fiber retail access offers and to revise some methodological guidelines (ex. fiber offers will have to be assessed at the level of the single promotion, as already provided for copper offers). Moreover, in case of TIM's network access legal separation, the obligation to inform AGCom about contracts concluded in the scope of public tenders to allow AGCom to verify the replicability of the fixed access offers would be removed.

❖ ***28-day billing***

Regarding the 28-day billing proceedings, see Note "Contingent liabilities, other information, commitments and guarantees", of the Notes to the Consolidated Financial Statements included elsewhere herein.

❖ ***Guidelines on line termination and switching costs***

On November 2, 2018, AGCOM published the Decision 487/18/CONS setting the new Guidelines on the charges applicable by Operators in case of customers' withdrawal.

Law no. 40/2007 ("Legge Bersani") allowed customers the withdrawal from the permanent contract at any time and provided that the costs they have to pay for the line termination or switching shall be real and economically justified (e.g. deactivation costs for the fixed line).

The Bersani Law was subsequently amended by the Italian Competition Law no.124/2017 and Decision 487/18/CONS aims at implementing the new provisions. However, AGCOM introduces additional charges for operators. In particular:

- Withdrawal in case of line termination or switching: the cost to be paid by the costumer is the minimum between the average rental fee (contract value) and the actual deactivation cost.
- Promotions: in case of early termination (in respect to the duration of the promotion), operators may only charge a share of the discounts proportional to the residual duration of the promotion at the moment of the withdrawal.
- Products with installments offered in conjunction with the electronic communication service: users can decide to pay the remaining installments instead of reimbursing them with a single payment.

❖ ***Terminal equipment for internet access***

On August 2, 2018 AGCOM approved the final decision (Decision 348/18/CONS) on terminal equipment (modem) for internet access.

With this resolution AGCOM clarifies that the modem is not part of the network and, therefore, the user's freedom of choice must be guaranteed as established by TSM Regulation

From December 1, 2018 the new offers must ensure that the customer can freely choose their terminal.

Decision 348/18/CONS also requires Operators to:

- remove any technical limitations of the modem, to allow the customer to use it for similar services provided by other operators;

- not request additional charges if the modem, which was provided free of charge and not used permanently by the user, is not returned to the operator;
- change the offer of current subscribers who in the past have been obliged to accept the paid provision of a modem, with a free of charge modem supply or, alternatively, give customers the right of withdrawal without any penalty.

TIM is compliant from December 1, 2018 with the free choice of the modem provision, however TIM deems that the aforementioned additional obligations are illegitimate and unjustified; therefore, TIM has appealed the Decision 348/18/CONS before TAR (Tribunale Amministrativo Regionale). The obligation concerning the change of offer of current subscribers, who in the past have been obliged to accept the paid provision of a modem, has been suspended by Council of State pending the TAR final decision which is expected by the end of 2019.

4.3.5 The Universal Service

The Universal Service ("**US**") is a minimum set of services of a certain quality, which must be made available to all customers, regardless of their geographical location in Italy and must be offered at a reasonable price, taking into account specific national conditions. To date, TIM is the only operator obliged by the Code of Electronic Communications (art. 58) to provide the Universal Service under the Universal Service Obligation ("**USO**") throughout Italy. Currently the services included in the USO are the provision of access at a fixed location and of telephone service, the directory inquiry service and the directories, the availability of public payphones, and the provision of specific measures for disabled users.

A Fund (The Universal Service Fund), established by the Ministry of Communications, is used to finance the net cost for the provision of Universal Service sustained by the designated operator (TIM) by means of contributions paid by the other operators. All the main companies active in the sector, including TIM, must contribute to this fund.

AGCom is responsible for verifying the net cost of the USO provision and to assess whether this amount represents an unfair burden for the operator. The designated operator can receive compensation only if the burden is determined to be unfair.

AGCom assessed the net cost and authorized the funding mechanism until the year 2005 and did not recognize any contribution for the years 2006 and 2007.

The net cost for the provision of USO for the years 2004-2007 have been calculated on the basis of a methodology established by AGCom in 2008 (decision 01/08/CIR) with retroactive effect, which led to a significant decrease of the amount to be financed.

Following Judgment no. 4616/2015, released on October 2, 2015, with which the Council of State overruled Agcom's Decision 1/08/CIR on the application of the new methodological criteria for the calculation of the Universal Service (USO) net cost related to the years 2004-2007, AGCom initiated proceedings for the review of the calculation with Decision 145/17/CONS for the years 2006-2007 and Decision 207/17/CONS for the years 2004-2005. The proceedings are still on-going.

Furthermore, with Decision 88/18/CIR, published on June 21, 2018, AGCom has set the net cost for the year 2008 equal to zero and the net cost for the year 2009 equal to 11.61 million euros which is to be shared by the fixed and mobile operators.

With respect to past litigation, the Council of State, with a decision published on July 7, 2015, rejected the appeal filed by TIM against the decision of the TAR on AGCom's decisions of 2010 by which AGCom had reviewed the proceedings for the years 1999-2000 and 2001-2003. As a result, the Council of State annulled AGCom's Decision of 2010 establishing a possible new renewal of the proceedings for the calculation of the contributions of the years 1999-2000 and 2001-2003.

Following the State Council decision, Vodafone requested TIM to refund the amounts paid for 1999-2000, 2002-2003 and subsequent periods. The proceedings are still pending.

4.3.6 Contribution fees for the functioning of AGCom

TIM and the other operators are required to pay contribution fees to fund the running costs of AGCom. These fees are calculated on the basis of each operator's revenues.

On February 19, 2019, AGCom issued Decision 527/18/CONS on the payment of AGCom contribution for the year 2019 (calculated on the 2017 financial statement data). The guidelines for the calculation of contribution fee are unchanged from the guidelines for the calculation of the 2018 fee. For the year 2019, AGCom decreased the rate from 1.35 per thousand to 1.30 per thousand. On the basis of this new rate, TIM paid, under reserve, about 18.328 million euros.

4.3.7 Government's UBB network state aid plans

In June 2016, the EU Commission authorized the Italian Government UBB State Aid Plan for a total amount of 4 billion euros aimed at covering almost 25% of the population living in about 7,200 municipalities belonging to the so called UBB "white areas" (areas in which there is no NGA network available and there is no interest of private operators to deploy it in the near future) of Italy. The 7,200 municipalities are grouped into two clusters, C and D. In Cluster C, 70% of connections have to reach at least 100 Mbit/s download and 50 Mbit/s upload, while the remaining 30% have to reach at least 30 Mbit/s download and 15 Mbit/s upload. In Cluster D, 100% of connections have to reach at least 30 Mbit/s download and 15 Mbit/s upload.

On June 3, 2016 Infratel published a first call for tender of 1.4 billion euros for deploying, and managing under 20-year concession an UBB "passive" infrastructure (ducts and dark fiber) in the white areas of 6 regions (Abruzzo, Molise, Emilia Romagna, Lombardia, Toscana and Veneto). On March 7, 2017, the first tender was awarded to Open Fiber.

On August 8, 2016, Infratel Italia called for a second tender for the ultrabroadband "white areas" of 10 additional Italian regions (Piemonte, Valle d'Aosta, Friuli Venezia Giulia, Liguria, Marche, Umbria, Lazio, Campania, Basilicata and Sicilia) and in the Trento Autonomous Province, for a total public financing of approximately 1.25 billion euros. TIM decided to not submit any bid. On July 28, 2017, the Second Tender was awarded to Open Fiber.

In August 2017, the "*Comitato interministeriale per la programmazione economica"* approved the so-called "Phase II of the UBB Plan" with approximately 3.4 billion euros budget, of which:

- approximately 2.1 billion euros are designated for infrastructural investments in "**grey areas"** (areas in which there is one NGA network available); and
- approximately 1.3 billion euros are aimed to incentivize UBB demand, through the concession of **vouchers** to families and businesses.

On April 4, 2018, Infratel launched a consultation on the public investment plan in "grey areas". According to the document under consultation, the aim of the public intervention in grey areas is to support investment projects in networks able to provide 1 Gbps symmetrical (download and upload) speed, thus achieving a "step change" with respect to the existing networks. The State aid plan must be yet notified to the European Commission for approval.

On April 19, 2018, Infratel called for a third tender for a total amount of 103 million euros to cover the residual ultrabroadband "white areas" not covered by private operators' plans, in Calabria, Puglia and Sardegna. Tim did not submit any economic offer. On December 19, 2018 the tender was awarded to Open Fiber.

4.3.8 Spectrum

In October 2018, the Ministry of Economic Development (MISE)'s auction for 5G frequencies was concluded. TIM was awarded the following slots:

- 2 x 10 MHz FDD in the 700 MHz band;
- 80 MHz TDD in the 3.6- 3.8 GHz band;
- 200 MHz in the 26.5-27.5 GHz band.

The slots in 3.6-3.8 GHz and 26.5-27.5 GHz bands are available from January 1, 2019 whilst the slots in 700 MHz band from July 1, 2022 after the freeing of TV broadcasting service. All the frequency rights of use will expire on December 31, 2037.

The total amount of TIM' license fee is 2,399.38 million euro which must be paid in several installments over the years 2018-2022 as reported bellow.

2018	2019	2020	2021	2022
€477,473,285	€18,342,111	€110,052,665	€55,026,332	€1,738,485,953

4.3.9 ANTITRUST ISSUES

❖ ***Antitrust in Italy***

➢ ***Legislation on competition***

TIM is subject to Italian competition law, and namely the Law of October 10, 1990 no. 287 ("Provisions aiming at protecting competition and the market") which set up the AGCM, or "Antitrust Authority".

The Antitrust Authority is responsible for:

(i) applying Law 287/1990 and supervising: (a) restrictive agreements; (b) abuses of a dominant position; and (c) concentrations of enterprises;

(ii) applying, whenever the necessary conditions are met, the relevant EU provisions (i.e., Articles 101 and 102 of the Treaty on the Functioning of the European Union);

(iii) applying Legislative Decree September 6, 2005 n. 206 concerning unfair commercial practices; and,

(iv) monitoring conflicts of interest in the case of individuals holding government positions.

In addition, the Antitrust Authority may:

(i) adopt interim measures; and

(ii) enforce commitments binding upon the proposing parties in order to dispel identified anticompetitive concerns closing the investigation without any finding of a violation.

- ***Pending proceedings before the Competition Authority on restrictive agreements and abuses of a dominant position***

Regarding the pending proceedings A514 and I820, see Note "Contingent liabilities, other information, commitments and guarantees", of the Notes to the Consolidated Financial Statements included elsewhere herein.

➢ ***Antitrust issues at the European level***

- ***Legislation on competition***

TIM is subject to the European competition law. European competition policy covers anticompetitive agreements (Art. 101 of The Treaty of Functioning of the European Union – TFEU), abuse of dominance (Art. 102 of TFEU), mergers (provided that the annual turnover of the combined businesses exceeds specified thresholds, according to Council Regulation (EC) No 139/2004) and state aid (Art. 107 of TFEU).

The EC is empowered by the Treaty to apply these rules and holds a number of investigative powers to that end (e.g. inspection at business and non-business premises, written requests for information, etc.). It may also impose fines on undertakings which infringe the EU antitrust rules. The main rules on procedures on the implementation of the competition rules set forth in Art. 101 and 102 of the Treaty are set out in Council Regulation (EC) 1/2003.

Since May 1, 2004 all National Competition Authorities have also been empowered to fully apply EU Antitrust rules (i.e. Art. 101 and 102 of the TFEU) in order to ensure that competition is not distorted or restricted. National courts may also apply these provisions in order to protect the individual rights conferred on citizens by the Treaty. State aids rules, on the contrary, can only be applied by the EC.

As part of the overall enforcement of EU competition law, the EC has also developed and implemented a policy on the application of EU competition law to actions for damages before national courts. It also cooperates with national courts in order to ensure the coherent application of the EU competition rules within the Member States.

4.3.10 TELECOMMUNICATION REGULATORY FRAMEWORK IN BRAZIL

TIM Group's operations in Brazil are subject to the 1997 General Law on Telecommunications (Lei Geral de Telecomunicações—"**LGT**") and to a comprehensive regulatory framework for the provision of telecommunications services adopted by the Regulatory Agency for Telecommunications—Agência Nacional de Telecomunicações ("**ANATEL**").

ANATEL is responsible for the regulation and implementation of national policies in matter of telecommunications. It is a quasi-independent body (the relationship with the Ministry of Communication is institutional, but not hierarchical) enjoying financial and operational autonomy and a wide range of functions and powers, to ensure retail customer´s rights, quality of service and competition to avoid concentration of services. The board members have a fixed term, are selected and appointed by the President under approval by the Senate.

ANATEL has the power to impose restrictions, limitations or conditions on concessions, permits or authorizations. ANATEL has the authority to propose and issue legally binding regulations on telecommunications service providers. The rules issued by ANATEL are subject to periodic updates. Any proposed regulation or action by ANATEL is subject to a period of public consultation, which may include public hearings, and can be challenged in Brazilian courts.

ANATEL privatized the former public monopolistic operator and progressively opened the market to competition, in addition to promoting universal access to basic telecommunications fixed services.

With regard to the operational activity of TIM Brasil, ANATEL developed regulations for mobile communication services (Serviço Móvel Pessoal or "**SMP**"), fixed communications services (Serviço Telefonico Fixo Comutado or "**STFC**") and data transmission and multimedia services (Serviço de Comunicação Multimídia or "**SCM**").

In 2010 virtual mobile operators were allowed to enter the market upon commercial agreements with the established operators.

In 2016 and 2017 ANATEL issued certain regulations that are particularly relevant to TIM Brasil's operations, including: Resolution No. 663/2016, which modified rules of the MVNO Regulation; Resolution No. 667/2016, which approved the General Regulation of Accessibility in Telecommunications Services of Collective Interest; Resolution No. 668/2016, which modified the STFC Regulation; and Resolution No. 671/2016, which approved the Regulation on the Use of the Radiofrequency Spectrum and modified the Regulation on the Collection of Public Price for the Right of Use of Radiofrequencies and the Regulation on the Imposition of Administrative Sanctions; Resolution No 683/2017, which disciplines the obligation to share support infrastructure for the provision of telecommunications service, including towers poles, towers, masts, cabinets, ducts, conduits, surface structures and suspended structures.

Throughout 2018, Anatel enacted several impotant regulations, such as: (i) Resolution No 693/2018 which approved the new General Interconnection Regulation (RGI) which revoked the "General Interconnection Regulatory Framework" enforced by ANATEL in 2005; (ii) Resolution No 694/2018 which approved the new General Plan for Competition Targets (PGMC), updating the tools for market analysis and identification of operators with market power and imposition of ex-ante obligations; (iii) Resolution No 695/2018 which approved the new Public Price for the Right to Use of Radio Frequencie (PPDUR) establishes two calculation basis, one for renovation of RF and other for license acquisition; (iv) Resolution No 702/2018 which approved the new Public Price for the Right to Explore Satelites and Telecommunication Services reducing the authorization fee to R$ 400,00 for all telecommunication service; and (v) Resolution No 703/2018 which approved the Spectrum Use Management, which set up a new cap for Spectrum usage limits.

❖ *Authorizations*

ANATEL carried out the privatization of the former public monopoly operator and gradually opened the sector to competition, in addition to fostering universal access to basic telecom fixed services (STFC). According to the General Telecommunications Law and to the regulations issued by ANATEL, licenses to provide telecommunications services are granted either under the public regime, by means of a Concession or a Permission, or under the private regime, by means of an Authorization. Only certain fixed-line service providers are currently operating under the public regime (Telefónica, Embratel, CTBC, Sercomtel and Oi, commonly referred to as "Concessionaires"). All the other telecommunications services providers in Brazil are currently operating under the private regime, including all the mobile and data service providers.

Since the launch of GSM mobile services in 2002, four main players operate in the mobile market (Claro, Vivo, Oi and TIM) and compete nationwide. Third generation mobile services were introduced in 2008 while fourth generation mobile services started in 2012.

The authorizations for fixed and mobile services give the TIM Group (which operates under the brand name TIM Brasil) coverage of the entire country of Brazil allowing it to provide fixed, mobile, long distance and data services.

The rules require that all telecommunications services' operators allow network access to any interested party to provide value-added services, without discrimination, unless technically impossible. The voice service providers can also provide value-added service through their own networks.

❖ *Interconnection rules*

Telecommunication operators must publish a public interconnection offer highlighting both economic and technical conditions and are subject to the "General Interconnection Regulatory Framework" enforced by ANATEL in 2005. In May 2012, ANATEL approved a new regulation which, from January 2014, requires the application of the "Bill and Keep" system for local fixed termination rates, *i.e.*, operators will take rights of tariffs generated on their networks, and no interconnection remuneration will be owed for local calls between two different networks.

Until 2016, the interconnection charges for fixed network ("**TU-RL**": Tarifa de Uso da Rede Local) amount to a percentage of retail prices for the incumbent operators. Alternative operators (including TIM) can apply asymmetrical interconnection rates exceeding up to 20% the one applied by the incumbents. As from 2016, the fixed interconnection rates have been following a cost oriented approach.

In July 2018, ANATEL approved the new General Interconnection Regulation which revoked the "General Interconnection Regulatory Framework" enforced by ANATEL in 2005.

The values of mobile termination rate (called "Value to Use the Mobile network"—"VU-M") are freely negotiated by operators. The National Regulatory Authority has, however, arbitration power in case of disagreement and it can determine a reference value according to criterion set up by regulation. From January 2013, the reference values set by ANATEL comply with a "glide path", which led to cost orientated values starting from 2016 until 2019 only to SMP operators. On February 24, 2017, considering the glide path provided in Act No. 6,211/2014, mobile termination call values (VU-M) were again reduced, depending on the Plano Geral de Autorizações do Serviço Móvel Pessoal ("PGA-SMP") Region, to approximately 0.03 (three cents) reais and, on February 24, 2018, it was reduced to 0.01 (one cents) reais.

On December 18, 2018, Anatel published the corresponding Acts No. 9,019/2018, 9,020/2018 and 9,021/2018, which determined the specific reference rates effective as of February 2019.

❖ *General Competition Plan*

In November 2012, ANATEL published the General Plan for Competition Targets (the "PGMC"), introducing tools for market analysis and identification of operators with market power and imposition of ex-ante obligations.

The decision opens the networks of the operators with SMP to unbundling and wholesale broadband access. It also improves transparency measures through the creation of a Supervisory Board to ensure the respect of the wholesale service quality levels.

In each market, ANATEL imposed a set of asymmetrical obligations to operators having SMP.

In the fixed access market an access obligation on copper networks (e.g., Leased Lines, bitstream and full unbundling) for the vertically integrated, fixed operators having SMP (Oi, Telefónica and Telmex) was introduced.

In July 2018, ANATEL published the new PGMC reviewing some of its points and set up two new markets: (i) interconnection for telephone traffic in fixed networks; and (ii) high capacity data transport. TIM Brasil has been identified as having SMP in the wholesale markets of mobile termination, national roaming, and high capacity data transport (in five municipalities). The measures applied to a SMP operator in those markets include:

- a glide path on mobile termination rates based on a price cap system and maintenance of partial Bill & Keep until the next revision of PGMC;
- an obligation to offer the service of national roaming to operators not having SMP based on a price cap system.
- an obligation to offer high capacity data transport based on a price cap system.

As from new PGMC, alternative operators can't apply asymmetrical interconnection rates exceeding up to 20% the one applied by the incumbents. As from 2016, the fixed interconnection rates have been following a cost oriented approach.

Due to such classification, we are subject to increased regulation under the PGMC, which could have an adverse effect on our business financial condition, results of operations and compliance with regulations.

➢ Cost models' implementation

In 2005, ANATEL issued a ruling for "Accounting Separation and Cost Accounting". This ruling introduced the obligation to present the Accounting Separation and Allocation Document ("Documento de Separação e Alocação de Contas"—"**DSAC**") for license holders and groups holding SMP in the fixed and/or mobile network interconnection and wholesale leased lines markets ("Exploração Industrial De Linha Dedicada"—"**EILD**"). Operators, including TIM, are providing ANATEL with the requested information since 2006 for fixed services and since 2008 for mobile services. In July 2014, ANATEL published the final decision regarding the costing models to set the wholesale reference values for the fixed and mobile access and interconnection services, as well as the reference values for the Leased Lines (Industrial Exploitation of the Dedicated Line – "**EILD**").

As from 2016, Fixed Termination Rates ("**FTRs**" or "**TU-RL**") and Mobile Termination Rates ("**MTRs**") are cost oriented to achieve the efficient cost level based on BU-LRIC model in 2019. For EILD, the efficient cost level will be reached in 2020.

ANATEL signaled that all products (not only call termination rates and Leased Lines) will be cost oriented from the revision of the PGMC. In October 2016, all operators were required to answer a Data Request from ANATEL, which intended to raise the necessary data to update the cost model for all the products in the PGMC, such as national roaming and passive infrastructure.

➢ Mobile interconnection rate glide path

In November 2012, TIM Brasil, along with other national mobile operators Vivo, Claro and Oi, were identified by ANATEL as having Significant Market Power (SMP) in the wholesale mobile termination market.

The remedies applied to SMP mobile operators included a glide path on mobile termination rate (VU-M), based on a price cap system.

In July 2014, ANATEL published a final decision regarding the cost model and the reference values of the mobile termination rates that will apply over the period from 2016 to 2019 for SMP operators. For 2016, MTRS were set with a Top Down methodology, and 2017-2018 MTRs will be based on linear progressive reductions until convergence to the BU-LRIC model is reached in 2019. The 2019 MTR (based on a full LRIC cost model) of 0.017 reais/min. (0.47 eurocents), will be lower than the current European MTR average of approximately 1.1 eurocents, although the latter is based on pure LRIC cost model.

Under the glide path of reductions defined by ANATEL, from February 2016, SMP operator MTRs (TIM Brasil, Vivo, Claro and Oi) are about 0.10 reais/min. (2.7 eurocents) on average. These termination rates represent a decrease of 37% relative to 2015 rates.

Between operators with SMP a "full billing" scheme is applied (i.e. each operator charges the total amount of the traffic terminated on its network). Conversely, between SMP and non SMP operators, an asymmetric scheme applies (so called "partial bill&keep"): each operator only pays the portion of the terminated traffic on the other network that exceeds a threshold percentage determined by the regulator with respect of the total traffic exchanged at the interconnection. Until February 2015, this threshold was set at 80% (i.e. a non SMP operator pays only if the terminated traffic on the SMP operator network is more than 80% of the total traffic exchanged at the interconnection).

According to the previous rules, by February 2015, the "partial bill & keep" threshold between SMP and non SMP operators would have decreased to 60% and from February 2016 the "full billing" scheme would have been adopted. To harmonize the evolution of the values of mobile interconnection with the introduction of cost-oriented values, in February 2015 the regulatory authority (ANATEL) postponed to 2019 the introduction of the "full billing" scheme in the interconnection between operators with market power and without market power, with a progressive decrease of the mentioned threshold over the next years.

However, as mentioned before, the last revision of PGMC in 2018, determined that partial Bill and Keel will be apply until the next revision of PGMC.

➢ Lower fixed to mobile call prices for incumbent operators

Under the Brazilian regulation, MTR reductions must translate into reductions in retail fixed to mobile call prices. Accordingly, ANATEL established new fixed to mobile retail call rates for fixed telephony concessionaries reflecting the lower mobile termination rates applicable starting on February 25, 2016.

➢ Allocation of the 700 MHz band

The auction for the allocation of the 700MHz band (698-806 MHz), the provision of the fourth generation mobile services and high speed internet was held in September 2014.

TIM Brasil, Claro and Vivo were granted three of the four auctioned national blocks of 10 + 10 MHz. TIM Brasil offered 1,947 million reais. The Auction also ordered the winning bidders to constitute an entity responsible for the spectrum clean-up process. A total amount of 3.6 billion reais is designated for the completion of the process and TIM shall pay 1,199 million reais.

The frequencies will be available in all Brazilian cities that could face interference in simultaneous TV and Long Term Evolution ("**LTE**") operations within 9 months of the complete "switch-off" of analogue television channels.

The initial forecast contemplated 5,570 cities with a switch-off in 2018, however, Ministry Ordinance nº 3493/2016, established that:

- approximately 1,500 cities can have an immediate LTE activation since the frequencies are already free;
- approximately 2,700 cities only need analog channel relocation (switch-off not necessary now); and
- approximately 1,400 cities would have a switch-off by 2018.

Bid winners were required to cover the costs for the implementation of the measures to overcome any spectrum interference and the expenses resulting from the reallocation of Digital TV channels.

In December 2014, TIM acquired the 718-728 MHz and 773-783 MHz sub-bands with national coverage; these authorisations are valid until 2029. These sub-bands are only partially available for mobile operation because they remain in use by broadcasters and ANATEL's approval required for their usage is still pending. The mobile operations on those sub-bands may only begin after the reallocation of broadcasting channels and the following approval by ANATEL and interference mitigation.

Since 2016, the spectrum of 5,089 municipalities have already made available for mobile operation, including all Brazilian capitals. These municipalities represent 91.84% of the Brazilian population (187.8 million). Currently about 2,859 cities are in operation.

Spectrum auction in the 1800 MHz, 1900 MHz, and 2500 MHz bands

On April 19, 2016, ANATEL's auction Committee assigned the multi-band local spectrum (135 MHz in the 1800 MHz, 1900 MHz, and 2500 MHz bands, including 60 MHz of unpaired Time Division Duplex spectrum) auctioned in December 2015 for mobile and fixed-wireless broadband services.

TIM was awarded Frequency Division Duplex ("FDD") spectrum in the 2500 MHz band enabling the provision of 4G/LTE services in the metropolitan areas of Recife and Curitiba. Authorization Terms were signed in July 2016 for 15 years, and can be renewed for an additional 15-year term.

TIM and other mobile operators (Vivo, Claro and Oi) were eligible to bid for spectrum in 1800 MHz band since the publication of Resolution No 703/2018, which set up a new cap for Spectrum usage limits.

➢ "Marco Civil de Internet"

The "Marco Civil Internet ", which went into effect in June 2014, constitutes a kind of "Constitution" on the use of the Internet in Brazil.

Key topics covered in the new regulations include net neutrality, collection, use and storage of personal data, confidentiality of communications, freedom of expression and the treatment of illegal, immoral or offensive contents.

The Marco Civil has been elaborated upon by the issuance of a government decree of implementation and enforcement. The ministry's decree (issued on May 11, 2016) addresses three main aspects:

- clarification of the scope and implementation of the net neutrality rules;
- implementation of the rights and obligations for the protection of personal data; and
- governance of the Marco Civil, including authorities in charge of its enforcement.

The decree went into effect on June 10, 2016.

In August, 2018, the Brazilian president passed Law No. 13,709/2018, which altered the Internet Framework and established a comprehensive data protection system that applies across multiple economic sectors and contractual relationships (*Lei Geral de Proteção de Dados*), or the LGPD. LGPD has detailed rules and obligations regarding the collection, processing, storage and use of personal data and will affect all economic sectors, including the relationship between customers and suppliers of goods and services, employees and employers and other relationships in which personal data is collected, whether in a digital or physical environment. In December, 2018, Provisional Measure 869/2018 passed by the former Brazilian president amended Law 13,709 to create the National Data Protection Authority, within the structure of the Presidency of the Republic, which implies in a larger control by the State and to, among other topics, extend to 24 months the entry into force of the Law, by which date (August 2020) all legal entities will be required to adapt their data processing activities to these new rules. Any additional privacy laws or regulations enacted or approved in Brazil or in other jurisdictions in which we operate could seriously harm our business, financial condition or results of operations

➢ Review of the current regulatory model for the provision of telecom services

The Brazilian government aims to review the 1997 General Telecommunication Law and to transform the old fixed telephony Concessions into Authorizations, modifying the relevant and related obligations.

On April, 11, 2016, following a public consultation that closed on January 15, 2016, the Ministry of Communications issued guidelines for ANATEL on how to carry out this transformation and move to a more market-oriented licensing approach.

The Ministry recommended that public authorities should promote access to broadband service at affordable costs and levels, putting broadband at the center of public policies.

ANATEL is directed to:

- propose concrete rules and criteria to enable the phasing-out of concessions;
- highlight the consistency of the new licensing rules with the existing infrastructure coverage obligations;
- ensure service provision (including broadband) in less attractive economic areas;
- give incentives to concessionaires to migrate to the new licensing framework;
- lessen the universal service obligations for fixed telephony;
- schedule the phasing-out of the retail price control over retail fixed telephony services;
- withdraw recurring licensing fees;
- schedule the phasing—out of the asset reversion scheme (foreseeing that the network assets used to provide services under a concession must be returned to the state upon the expiry of the concession); and
- establish suitable mechanisms to ensure regulation compliance control.

As a result of the on-going debate regarding the licensing regime, ANATEL was tasked with reviewing concession contracts by December 2016. However, after the publication of Resolution 673, approved on December 30, 2016, the deadline for reviewing these contracts was postponed to June 30, 2017, notwithstanding revised concession contracts have been not signed yet.

Additionally, a Bill of Law (PLC—Projeto de Lei da Câmara—79/2016) is under review, which amends Law 9.472/1997 (LGT), allowing ANATEL to change the licensing model of telecommunications service. The concession agreement shall be replaced by an authorization form following ANATEL's approval. ANATEL is responsible for attesting the criteria of "effective competition" and "proof of fulfillment of universal service targets in the provision of Serviço Telefônico Fixo Comutado or Fixed Switched Telephony Service ("**STFC**").

This Bill also changes radiofrequency rules, establishing subsequent and unlimited renewals of up to 20 years and creates Spectrum Secondary Market, allowing Radiofrequency trading among players.

The Bill has been approved by the Lower House and the Senate but has not been approved at the presidential level. On December 22, 2016, a number of senators from opposition parties filed a petition for writ of injunction ("Mandado de Segurança"). Legislative discussion returned in February 2017 and the Bill of Law now awaits Senate approval.

The bill awaits a vote in the Senate. Even if the Senate approves the bill without changes in connection with the proposal approved by the House of Representatives, Presidential approval will be required.

Additionally, in 2018, entered into force the Conectivity Plan Decree (Decree No 9612/2018) which updates and consolidates, in a single instrument, the public policies for the telecommunications in Brazil. The Decree establishes a series of guidelines for execution of terms of conduct adjustment, onerous granting of spectrum authorization and regulatory acts in general which includes: (i) expansion of high capacity telecommunications transport networks; (ii) increased coverage of mobile broadband access networks; and (iii) broadening the coverage of fixed broadband access network in areas with no internet access offer through this type of infrasctructure. It also establishes that the network implemented from the commitments will be subject to sharing from its entry into operation, except when there is appropriate competition in the respective relevant market.

This decree repealed Decree No. 4,733 / 2003, which provided for public telecommunications policies; Decree No. 7,175 / 2010, which established the National Broadband Plan (PNBL); and Decree No. 8.776 / 2016, which created the Brazil Intelligent Program, a new stage of expansion of the PNBL with actions to universalize access to the Internet and increase the average speed of fixed broadband in the country.

4.4 TRANSACTIONS WITH U.S. SANCTIONED COUNTRIES

In accordance with our Code of Ethics and Conduct, we seek to comply with all applicable international trade laws including applicable sanctions and embargoes. Below we discuss our activities related to certain countries that are targets of U.S. economic sanctions: Iran, North Korea, Sudan and Syria (the "**Designated Countries**"[3]).

Activities relating to the Designated Countries

To our knowledge, activities relating to Designated Countries are as follows:

(i) **Roaming Agreements** with local mobile phone operators:

- **North Korea**: none;
- **Iran:** KFZO-TKC (former Payam Kish), Gostaresh Ertebatat Taliya PJS (former Taliya), Rightel Communication, Irancell (**MTN**), Mobile Company of Iran (MCI) and Telecommunication Company of Iran;
- **Sudan**: ZAIN Sudan and Areeba (former MTN Sudan);
- **Syria**: MTN Syria (former Spacetel Syria 94 and former Areeba) and Syriatel Mobile Telecom SA ("**Syriatel**").

(ii) **International Carrier Agreements** for the delivery of voice and data traffic from such countries to our networks and from our networks to such countries including in connection with our roaming agreements. To this end, our subsidiary Telecom Italia Sparkle S.p.A. ("**TI Sparkle**"), directly and through its subsidiaries, has agreements with the Telecommunication Company of Iran (**TCI**) in Iran; Sudan TLC (former PT&TG PUBLIC SUDAN), Sudatel Telecom Group, ZAIN Sudan and Canartel in Sudan; and Syrian Telecom Establishment (STE) (Directorate General of Syria) in Syria.

TI Sparkle has an agency agreement with Cypress Corporation DFZCO (a company incorporated in the "free zone" of the Dubai airport) that promotes the use of voice services towards Syrian Telecom Establishment (**STE**), a company reportedly affiliated with the government of Syria. The agreement provides that we pay this agent based on a fee that is a percentage of revenues we earn.

In addition, TIM S.p.A. has entered into certain agreements for the provision of TLC services (marine radio traffic) with Telecommunication Infrastructure Company of Iran (**TIC**) for services to the Islamic Republic of Iran Shipping Lines.

(iii) **Commercial Sale and Other Agreements**.

In quantitative terms, the impact of all such agreements (roaming, international carrier, commercial sale and other) on the TIM Group consolidated financial statement line items are as follows:

	Year ended December 31, 2018
	(thousands of euros)
Revenues	7,794
Expenses	6,796
Receivables	28,024
Payables	28,181

Roaming Agreements

We operate one of the largest mobile networks in Italy. Through our foreign subsidiaries, we also have large mobile operations in Brazil (Tim Participações S.A. through its subsidiary TIM S.A.). The following is the definition of roaming:

Roaming: *A function that enables wireless subscribers to use the service on networks of operators other than the one with which they signed their initial contract. The roaming service is active when wireless is used in a foreign country (included in GSM network).*

[3] Effective October 12, 2017, the U.S. Government lifted comprehensive sanctions with respect to Sudan and the Government of Sudan, although the State Department has not yet remove Sudan from its list of state sponsors of terrorism. Accordingly, we have included disclosure with respect to Sudan and have included Sudan within the definition of 'Designated Countries.

Like all major mobile networks, in response to competition and customer demands, TIM and Tim Participações group have entered into roaming agreements with many foreign mobile networks, in order to allow customers to make and receive calls when travelling abroad.

Roaming agreements, including those relating to the Designated Countries, are on standard terms and conditions. In fact, entering into roaming agreements is an activity carried out in the ordinary course of business by a mobile network operator.

Roaming agreements are, generally, reciprocal. Pursuant to a roaming agreement our mobile customers may, when they are in a foreign country covered by the network (the "**Foreign Network**") of an operator with which we have a roaming agreement, make and receive calls on their mobile using such operator's network. Likewise, when a customer of such Foreign Network is in Italy (or Brazil), such customer may make and receive calls using our networks or the networks of other mobile operators in Italy (or Brazil) if this foreign Network has an International Roaming Agreement with other Italian (or Brazilian) Operators.

Calls made and received by our customers through the services of the Foreign Network are billed by the Foreign Network to us at the roaming rate agreed upon in the applicable roaming agreement. We then bill our end customers according to the specific tariff plan of the subscription they have signed with us. Similarly, we bill the Foreign Network at the roaming rate agreed upon in the applicable roaming agreement. The Foreign Network will bill its clients for the calls made and received using our networks according to their specific offer to their customer base. Roaming contracts do not, generally, contemplate other fees or disbursements.

The purpose of all of these roaming agreements is to provide our customers with coverage in areas where we do not own networks. In order to remain competitive and maintain such coverage, we intend to continue maintaining these agreements.

In 2018, our total revenues from roaming agreements with networks of the Designated Countries are detailed as follows:

	Year ended December 31, 2018 (thousands of euros)
North Korea	—
Iran	5
Sudan	10
Syria	5
Total revenues from roaming agreements	**20**

In 2018, our total charges from roaming agreements with networks of the Designated Countries are detailed as follows:

	Year ended December 31, 2018 (thousands of euros)
North Korea	—
Iran	82
Sudan	90
Syria	14
Total charges from roaming agreements	**186**

As of December 31, 2018, our total receivables from roaming agreements with networks of the Designated Countries are detailed as follows:

	As of December 31, 2018 (thousands of euros)
North Korea	—
Iran	694
Sudan	52
Syria	45
Total receivables from roaming agreements	**791**

As of December 31, 2018, our total payables from roaming agreements with networks of the Designated Countries are detailed as follows:

	As of December 31, 2018 (thousands of euros)
North Korea	—
Iran	2,692
Sudan	53
Syria	90
Total payables from roaming agreements	**2,835**

The amounts of revenues, charges, receivables and payables are *de minimis* when compared to our consolidated revenues, operating expenses, trade receivables and trade payables, respectively.

International Carrier Agreements with the Designated Countries

In the modern telecommunication business, when traffic from a specific network is placed with, or transported through, our networks, we receive a fee from the incoming network. Likewise, when traffic coming from one of our networks is placed with, or transported through, another network, we owe a fee to such network.

The purpose of these agreements is to allow the uninterrupted exchange of international traffic. Consequently, we intend to continue maintaining these agreements.

In 2018, our total revenues from traffic from networks located in the Designated Countries to our networks are detailed as follows:

	Year ended December 31, 2018 (thousands of euros)
North Korea	—
Iran	438
Sudan	1,580
Syria	4,649
Total revenues from traffic	**6,667**

In 2018, our total charges from traffic to networks in the Designated Countries from our networks are detailed as follows:

	Year ended December 31, 2018 (thousands of euros)
North Korea	—
Iran	5
Sudan	1,936
Syria	4,669
Total charges from traffic	**6,610**

As of December 31, 2018, our total receivables from traffic from networks located in the Designated Countries to our networks are detailed as follows:

	As of December 31, 2018 (thousands of euros)
North Korea	—
Iran	5,493
Sudan	11,511
Syria	8,042
Total receivables from traffic	**25,046**

As of December 31, 2018, our total payables from traffic to networks in the Designated Countries from our networks are detailed as follows:

	As of December 31, 2018 (thousands of euros)
North Korea	—
Iran	5,151
Sudan	11,832
Syria	8,363
Total payables from traffic	**25,346**

Such amounts of revenues, charges, receivables and payables are *de minimis* with respect to our consolidated revenues, operating expenses, trade receivables and trade payables, respectively.

Commercial Sale and Other Agreements

TI Sparkle provides institutional access to Internet to Syria and Sudan by means of Seabone IP ports and data transmission capacity through international cable systems.

On December 20, 2016, Olivetti and Faravaran Hamgam, a local Iranian company, executed an agreement for the local production and sale of Olivetti's electronic cash registers and the provision of assistance in connection with these machines in Iran. Faravaran Hamgam will locally assemble Olivetti products through one of its own controlled companies. Production has not yet started.

In September 2016, TI Sparkle reached an agreement with TCI for the development of a Point of Presence ("**POP**") of Sparkle Internet backbone in Iran and the provision of IP Transit services from Sparkle to TIC. Currently the POP is not open.

In 2018, our total revenues from Commercial Sale and Other Agreements with the Designated Countries are detailed as follows:

	Year ended December 31, 2018 (thousands of euros)
North Korea	—
Iran	—
Sudan	202
Syria	905
Total revenues from commercial sale and other agreements	**1,107**

As of December 31, 2018, our total receivables from Commercial Sale and Other Agreements with the Designated Countries are detailed as follows:

	As of December 31, 2018 (thousands of euros)
North Korea	—
Iran	502
Sudan	333
Syria	1,352
Total receivables from commercial sale and other agreements	**2,187**

* * *

Disclosure pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012 (ITRSHRA)

Other than the disclosure above on activities related to the Designated Countries, to our knowledge, none of our sales of products and services are required to be disclosed pursuant to ITRSHRA Section 219.

4.5 GLOSSARY OF SELECTED TELECOMMUNICATIONS TERMS

The following explanations are not intended as strict definitions, but to assist readers to understand certain terms as used in this Annual Report.

2G (second-generation Mobile System). Second-generation mobile systems using digital encoding and including GSM, D-AMPS (TDMA) and CDMA. 2G networks are in current use all over Europe and other parts of the world. These systems support voice and limited data communications as well as auxiliary services such as fax and SMS.

3G (third-generation Mobile System). Third-generation wireless system, designed to provide high data speeds, always-on data access, and greater voice capacity. 3G networks allow the transfer of both traditional communication services (telephony, messaging) and data (such as downloading Internet information, exchanging email, and instant messaging). The high data speeds, measured in Mbps, are significantly higher than 2G, 3G networks technology enable mobile video, high-speed internet access. The standards of the 3G technology include UMTS, based on WCDMA technology (quite often the two terms are often used interchangeably) and CDMA2000.

4G (fourth-generation Mobile System). Fourth-generation systems are designed to provide, in addition to legacy services, mobile broadband Internet access to several kinds of devices such as laptops with wireless modems, smartphones, tablets, and other mobile devices. Current and future applications include mobile web access, IP telephony, gaming services, high-definition mobile video, video conferencing, Internet of Things and cloud computing applications. 4G standards include LTE e LTE-A (LTE-Advanced). LTE offers a higher spectral efficiency in bits per Hertz and download bandwidth up to 150 Mbit/s per cell reducing the latency time. LTE enables services that require high interactivity (e.g., gaming, video conferencing). A further development of LTE, called "LTE Advanced," is being implemented and will allow reaching even higher bitrates in download.

5G (fifth-generation Mobile System). 5G indicates the fifth generation wireless systems that will be introduced on market starting from 2020. International standard for a like 3GPP (3rd Generation Partnership Project) and ITU Commission (International Telecommunication Union) are defining characteristics and standards of 5G future connectivity and the first field trials will be launched in 2018.

The main elements of the 5G network will be:

- bit-rate significantly higher than 4G in larger spectrum bandwidth (up to tens of Gbit/s over hundreds of MHz) to ensure greater quality of service, for innovative services such as video download and live streaming;
- ultra-low latency in the order of milliseconds;
- possibility of connecting simultaneously hundreds of thousands of objects (Internet of Things): wearable technologies, automatic systems for traffic control, assisted driving for vehicles, home automation;
- ability to connect moving vehicles at higher speeds.

Access charge. Amount charged by national operators for the use of their network by customers of other operators. It is also known as an "interconnection charge".

ADS (American Depositary Shares)/ ADR (American Depositary Receipt). Equity shares used for the listing of TIM ordinary and savings shares on the NYSE (The New York Stock Exchange). Each ordinary ADS represents to 10 TIM ordinary shares.

ADSL (Asymmetric Digital Subscriber Line). Technology that transforms, through a modem, the traditional copper fixed line into a high-speed digital connection for the transfer of multimedia data. ADSL is an asymmetrical technology used to achieve broadband transmission.

Agile. In software engineering, the expression Agile (or agile software development) refers to a set of software development methods that are opposed to traditional models such as cascade models (e.g., waterfall model); Agile methods propose a less structured approach focused on the objective of delivering to the customer quickly and frequently software that is functional and with best quality. Among the practices promoted by agile methods, today in general referred to the Project Management of products (not exclusively software), there are: the setup of small, poly-functional and self-organized development teams, iterative and incremental development, adaptive planning, and the direct and continuous involvement of the customer in the product development process.

AI (Artificial Intelligence). Ability of a technological system to solve problems and carry out tasks and activities typical of the mind and human behavior. In the computer science field, it is the discipline that deals with creating machines (hardware and software) able to "act" autonomously (solve problems, perform actions, etc.).

API (Application Programming Interface). It is a set of procedures used to interact with other programs and expand their functionalities. APIs are software libraries available for a given programming language that extend some functionality of the platforms making them interoperable and open to different implementations.

AltNets (Alternative Network Operators). Companies, other than the incumbent operators, that operate telecommunications systems in a national market.

Analog transmission. Legacy non-digital transmission technology where the representation of voice, video or other information is done by a continuous signal for which the time varying feature (variable) of the signal is a representation of source time varying quantity.

ATM (Asynchronous Transfer Mode). A network protocol through which the transfer of data is achieved using the encapsulation of fixed length (53 bytes) data units, called cells, instead of variable-length packets as is the case in packet-switched networks.

Backbone. Portion of the telecommunication network that supports long-distance connections which aggregates large amount of traffic and from which the connections for serving specific local areas depart.

Big Data. Big data is a term used to describe the set of technologies and methods for massive data analysis. The term indicates the ability to extrapolate, analyze and relate a huge amount of heterogeneous, structured and unstructured data, to discover the links between different phenomena and predict the future ones.

Bit-stream access. Wholesale interconnection services which consist in the supply by a dominant telecommunications operator (incumbent) of access transmission capacity between an end customer and an interconnection point of another operator (OLO).

Blockchain. Blockchain represents an innovative technology for structuring data and information with sharing on the network; a blockchain system is similar to a distributed database or virtual register, structured as a chain of blocks (hence the term blockchain) containing the transactions, and whose validation is entrusted to a consensus mechanism distributed on all the nodes of the network participating to the chain. The main distinguishing characteristics of blockchain are the immutability of the registry, the traceability of transactions and the security based on advanced cryptographic techniques. Blockchain technologies are currently used to support global supply chains, financial transactions (e.g., BitCoin), accounting assets and distributed social networks.

BRAS (Broadband Access Server). Also named BNG, BRAS is equipment that handles the access sessions of fixed broadband users. It authenticates the users, terminates the logical links originated at users' premises, produces user accounting data, may apply policies and QoS (Quality of Service) techniques (for the description or measurement of the overall performance of a service).

Bottom-up. The bottom-up approach develops a cost accounting model beginning with the expected demand in terms of subscribers and/or traffic. It then assesses the network design and related costs based on the network engineering model.

Broadband services. Broadband includes network technologies which achieve a transmission speed of 2 Mbit/s. These speeds are made available on both the copper fixed-line, through ADSL technology, and mobile network, starting from third generation systems. Broadband services include voice and data. Data services comprise high speed internet access, interactive video and audio files, point to point and multi point video services (video calling and video conferencing), video on demand (download and streaming) and television programs.

Broadcast. Simultaneous transmission of the same information to all nodes and terminal equipment of a network.

BSC (Base Station Controller). Control node of the 2G radio access network and interface with the MSC switching node. It has the task of supervising and controlling radio resources, for both call or data set up and maintenance.

BSS (Business Support System). The system used by network operators to manage business operations such as billing, sales management, customer-service management and customer databases.

BTS (Base Transceiver Station). Radio base station transmitting and receiving the GSM radio signal to cover an area, split in one or more cells) by using one or more radio transceivers (TRX). BTS performs also GSM communications ciphering/deciphering.

Bundle. Commercial offer including multiple telecommunications services (voice, broadband internet, IPTV, other) by an operator under the same commercial brand. *Dual Play* bundle includes fixed telecommunication services and broadband internet; *Triple Play bundle* is the "dual play bundle" integrated with IPTV; *Quadruple Play bundle* is the "bundle triple play" integrated with mobile telecommunication services.

Caching. Web-content caching (videos, HTML pages, images, etc.) is a technology that allows for the reduction of bandwidth usage and content access time. A cache stores copies of documents requested by users, so that subsequent requests can be satisfied by the cache itself, under appropriate conditions.

Carrier. Telecommunication services operator, providing a transport of communication services by means of its physical telecommunication network.

Carrier Aggregation. Technology used to aggregating more radio carriers to increase the transmission speed over a wireless network.

CCA. In a current cost accounting (CCA) approach, the operator's asset base is annualized based on the gross replacement cost of the assets. CCA belongs to the family of constant annualization methodologies where the depreciation share is stable and the cost of capital share decreases over time, resulting in decreasing annuities. Unlike historical cost accounting, in current cost annualization methods the amortization is adjusted according to variations in the price of the assets being considered due to technical progress and general variations in price (inflation).

CDMA (Code Division Multiple Access). A channel multiple access method used in radio communication. First radio systems based on CDMA were developed by Qualcomm, and commercially introduced in 1995. It enables the simultaneous transmission on the same channel of multiple signals, each of which is uniquely coded to distinguish it from the other messages.

CDN (Content Delivery Networks). Are content distribution systems (especially large multimedia contents, such as IPTV) managed by a Service Provider for the provision of audio streaming services and video, with better quality towards customers.

Cell. Geographical portion of the territory illuminated by a radio base station.

Central Office. A building where the copper wires or optical fibers that make up the access network, reaching the customers, originate from. It hosts equipment for telephony services ('Stadio di Linea' in TIM terms), broadband services (DSLAM) and possibly ultrabroadband services (OLT). Some COs also host equipment of higher hierarchical rank (SGU for telephony, router for data services), and those COs also collect traffic from the other COs which are not so equipped.

Cellular. A technique used in mobile radio technology to use efficiently the same spectrum of frequencies in a network. Controlled power radio transmitters are used to cover a "cell" (i.e., a limited area) so that the spectrum used for it can be reused without interference in other parts of the network.

Channel. The portion of a communications system that connects a source to one or more destinations by means of transmission media and optical, electric, electromagnetic signals.

Closed User Group. Groups of customers who can make and receive calls or messages within the group at special conditions (e.g., restricted access, dedicated pricing)

Cloud. The term Cloud is used as an abbreviation of the concept of "Cloud Computing", a model of consumption of processing resources (e.g., networks, servers, memory, applications and services) through the network. With the Cloud, the end customer, otherwise defined as cloud consumer, is allowed widespread, easy and on-demand access to a shared and configurable set of resources that can be quickly acquired and released with minimal management or interactions with the service provider. The Cloud model is made up of five essential features: 1) Self Service on customer request, 2) broad-network access, 3) resource sharing, 4) elasticity/ automation in resource demand, and 5) certified SLAs, three service models (see also SaaS, PaaS and IaaS) and four distribution/deployment models (private, public, hybrid and communities).

Cogeneration. Cogeneration is the combined production of electrical (or mechanical) energy and useful heat from the same primary source. By using the same fuel for two different purposes, cogeneration aims for a more efficient use of primary energy, with associated cost savings especially in production processes where there is a strong overlap between the use of electricity and heating.

Cognitive Computing. Advanced artificial intelligence system in which the machines have part of the typical functions of a human brain. Cognitive computing technologies are able to process enormous amounts of information, learn autonomously, interact in human language and reproduce human thought models.

Community. A group of people who have some interests in common and communicate via Internet (i.e., via social network).

Connected Cars. Connected Cars are vehicles with internet access and sensors for sending and receiving signals, perceiving its surrounding environment and communicating with other vehicles and services.

Co-siting. Agreements to share technological sites (for Telecommunications, specifically, sites of access to the network and passive infrastructure) by several operators in order to achieve a more efficient use of network infrastructure in urban and rural areas.

CPE (Customer Premise Equipment). An electronic device (terminal, telephone, modem) for telecommunications used on the user's side that is able to connect directly to the geographic transmission network through appropriate interfaces. The connection between the CPE and the network can be realized on physical carrier (optical fiber, telephone twisted pair) or on radio (wireless) carrier.

CPS (Carrier Pre-selection). Within the framework of the Equal Access policy guaranteed to all operators, the CPS is a feature of the telephone network that allows to permanently specify the call routing to the chosen operator. This function must be implemented by the access operators in their own plants.

Cybersecurity. Cybersecurity deals with the analysis of threats, vulnerabilities and risks associated with internet-connected systems, including hardware, software and data, to protect such systems from attempts to expose, alter, disable, destroy, steal or gain unauthorized access or make unauthorized use of an asset.

D-AMPS (Digital-Advanced Mobile Phone Service). A digital version of AMPS (Advanced Mobile Phone Service), the original analog standard for cellular telephone service in the United States.

DAS (Distributed Antenna System). DAS is a network of distributed antennas connected to a signal source in order to provide wireless services in a geographical area or indoor. The radiofrequency signal is combined and distributed through an antenna system.

Data Center. Data Center is the department of a company that hosts and manages back-end IT systems and data repositories (i.e., its mainframes, servers, databases, etc.). In the past, this type of management and control was in a single physical place, hence the name "data center". The development of new distributed computing technologies has inaugurated new management criteria that see more data centers located/distributed at both a physical and virtual level.

DCC (Digital Contact Center). DCC is a set of platforms used to connect customers to most appropriate human and virtual customer care agents, via different channels (e.g., voice, web, apps, mail, chat, sms) and to support agents in their interaction with customers (e.g., verbal ordering, back office).

DCS 1800 (Digital Communication System). A derivative of the GSM cellular mobile telephone standard. "1800" refers to the frequency used of 1800 MHz. DCS 1800 is the European PCN standard.

DDoS (Distributed Denial of Service). A distributed denial-of-service (DDoS) is an attack to a target, such as a server, website or other network resource, and cause a denial of service for users of the targeted resource. A flood of incoming messages, connection requests or malformed packets to the target system forces it to slow down or even crash and shut down, thereby denying service to users or systems.

Decommissioning. The disposal of the oldest technological solutions (legacy or obsolete) in order to rationalize and simplify the current Telecommunication networks with the aim of optimizing investments and improving the quality and time-to-market of services.

DevOps. DevOps is an agile method of software development that aims at communication, collaboration and integration between developers and operations operators. DevOps is an approach to the development and implementation of applications in a company, such as the release of the product, the testing of the software, and the evolution and maintenance (correction of bugs and minor releases) of the product to increase reliability and security and speed up development and release cycles.

Digital. A mode of representing a physical variable such as speech using digits 0 and 1 only. The digits are transmitted in binary form as a series of pulses. These networks, through the use of a technology converting analog signals into digital ones, allow for higher capacity and higher flexibility. Digital systems offer lower noise interference and can incorporate encryption as a protection from external interference.

DLA (Data Layered Architecture). An architecture for real-time management of user data in telecoms networks (such as user profiles, etc.). It introduces a separation between a logically centralized data storage layer, taking into account data consistency and availability, and a front-end layer which handles requests coming from network elements.

DPI (Deep Packet Inspection). A technology for analysis of live traffic packets which looks 'deeply' into packets payload (i.e., up to application level, rather than just at IP/TCP/UDP headers level). It enables advanced traffic management.

DSL Network (Digital Subscriber Line Network). A network technology family that provides wide bandwidth digital transmission at short distances, through the traditional twisted copper pairs from the first switching office to the end user.

DSLAM (Digital Subscriber Line Access Multiplexer). DSLAM denotes equipment multiplier of digital access lines able to process digital signals of various clients with xDSL lines and multiply them in a high rate data link to the nodes of the Internet.

DTT (Digital Terrestrial TV). Digital Terrestrial Television Broadcasting is a type of broadcasting technology that provides a more effective way of transmitting television services (in terms of number of channels and images quality) using a digital system.

DVB—H (Digital Video Broadcasting—Handheld). DVB—H was a standard for the transmission of digital video optimized for mobile networks and handheld devices such as smartphones and cellular phones.

DWDM (Dense Wavelength Division Multiplexing). This is a technology for multiplying and transmitting at the same time optical signals with different wavelengths in a single optical fiber in order to increase the available amount of bandwidth.

EDGE (Enhanced Data for GSM Evolution). Technology that increases the speed of data transmission of the GPRS, the standard from 30-40 kbit/s to 400 kbit/s in the best radio transmission radio condition.

Edge (Network Edge). A segment of the network lying between access and core, wherein service functions are located (e.g., those performed by BRAS). Depending on the context, it may be quite distributed (e.g., to the level of mobile Base Station), or less distributed (e.g., at the edge of the backbone).

EEB (Energy Efficiency in Buildings). International initiative promoted by the World Business Council for Sustainable Development (WBCSD) for research in energy efficiency in buildings in order to reduce the environmental impact and the energy costs.

EFFC (Extraction Full Free Cooling). A cooling system for the reduction of consumption without the use of greenhouse gases. The EFFC is based on the principle of free cooling (forced ventilation without the use of air-conditioning), combined with a system to extract the hot air produced by the apparatus and further cooling (adiabatic) of incoming air obtained by exploiting a zone with a high concentration of nebulized water.

EMF limits (ElectroMagnetic Field limits). Electromagnetic fields are present everywhere and are generated both by natural sources (e.g., thunderstorms, earth magnetism) and human-made sources (e.g., such as power lines, TV antennas, mobile base stations, microwave ovens). They are known to affect human body in ways that depend on their frequency. For radiofrequency fields, such as those produced by mobile base stations and mobile handsets, the major biological effect is heating of the body tissues. The current view of scientific community, as outlined by World Health Organization, is that while exposure to high levels of EMF are harmful to health, there is no evidence that prolonged exposure to low levels of EMF might be harmful. The definition of what is meant to be a level low enough to be harmless is left to individual countries, however guidelines have been defined by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

For Italy, the exposure limit is 20 V/m. In homes, schools, playgrounds and places where people may stay for longer than 4 hours per day, an 'attention value' of 6 V/m is applied and averaged over any 24 hour period.

EMS (Environmental Management Systems). Environmental management systems contribute to the sustainable management of production and support processes and are a stimulus to the continual improvement of environmental performance as they are tools to ensure effective management, prevention and the continuous reduction of the environmental impact in work processes

eNB (Evolved Node B). The Radio Base Station in 4G technology, which implements LTE radio interface and manages its radio resources.

EPC (Evolved Packet Core). The core segment of a 4G network. It performs management of user mobility, routing of traffic (which in 4G is only packet traffic), policy enforcement, production of accounting data, interconnection with IP networks.

EPS (External Power Supplies). External power supplies of equipment.

eSIM (embedded SIM). The evolution of the SIM. An Embedded SIM is an integrated circuit embedded directly inside a device and consequently not extractable and not replaceable, but remotely managed through the functionality of the device itself.

Ethernet: Family of computer networking technologies for local area networks (LANs) and metropolitan area networks (MANs).

Exchange. See Switch.

Fixed UBB. Access technologies involving the use of optical fibers, known as FTTx, to provide ultrabroadband connectivity.

FTTx (*Fiber to the ...*). The term used to indicate any network architecture that uses fiber optic cabling in telecommunications access networks to replace, partially or totally, traditional copper cables. The various technological solutions differ in the point of the distribution network where the fiber connection is made, with respect to the end-user's location. In the case of **FTTC** (Fiber to the Cabinet) the fiber connection reaches the

equipment (distribution cabinet) located on the sidewalk, from where copper connections are run to the customer; in the case of FTTB (Fiber to the Building) the fiber arrives at the base of the building to a distribution box from where the vertical copper connection starts; in the case of **FTTH** (Fiber to the Home) the fiber connection terminates inside the customer premises.

FWA (Fixed Wireless Access). FWA refers to a set of transmission systems developed to exploit specific frequencies of the radio spectrum in order to provide fixed broadband connectivity services (with nominal connection speeds equal to 1 Gbps).

Gateway. An interconnection node between networks. A Gateway node may be used to separate networks belonging to different Domains or make functionally different networks interwork through protocol interworking.

G-FAST (Fast Access to Subscriber Terminal, group "G" of the ITU-T recommendations) is a DSL standard, fourth generation on copper, adopted by ITU-T starting from 2014 that allows to reach aggregate Downstream speeds + Up Stream of about 500 Mbit /s up to 100m. and about 800-900 Mbit /s up to 50m. It is therefore a technology with a speed higher than VDSL2 and eVDSL but, being optimized for very short distances, the network devices must be positioned even closer to the customer than the cabinets line, or rather in distribution boxes at or at the base of buildings.

GRI (Global Reporting Initiative). The Global Reporting Initiative (GRI) is a leading organization in the field of sustainability. GRI promotes sustainability reporting as a way for organizations to become more sustainable and contribute to sustainable development.

GGSN (Gateway GPRS Support Node). Node that acts as a gateway for data traffic between mobile networks (2G and 3G) and the Internet network or private networks.

GPON (Gigabit capable Passive Optical Network). A passive optical network (PON) is a network architecture that brings fiber cabling and signals to the home using a point-to-multipoint scheme that, by unpowered fiber optic splitters, enables a single optical fiber to serve multiple premises.

GPRS (General Packet Radio System). Packet switched system to efficiently transmit data over 2G cellular networks.

GRX (GPRS Roaming eXchange for Mobile Operators). The GRX service allows Mobile Operators to globally interconnect GPRS networks around the world enabling global GPRS roaming coverage.

GSM (Global System for Mobile Communication). A worldwide standard for digital cellular telephony working on the 900MHz and 1800MHz bands. It belongs to the Second Generation (2G) of mobile systems.

HDSL (High-bit-rate Digital Subscriber Line). Technology of xDSL family, standardized in 1994. It provides up to 8 Mb/s symmetrical over copper.

HLR (Home Location Register). Database where customer data are recorded. It is part of 2G and 3G systems.

Home Access Gateway—Access Gateway—Home gateway—Residential Gateway. Home networking device that is used to concentrate voice/data/video traffic of customers for private TLC networks and to connect devices in the home to the Internet or other WAN.

Housing. Leasing of physical space to customers, which is managed within a data center for the installation of their own equipment or servers.

HSDPA (High-Speed Downlink Packet Access/UMTS Hi Speed—Universal Mobile Telecommunications System). Evolution of UMTS, which enables broadband mobile data both in Downstream (HSDPA) and Uplink (HSUPA), up to 42 Mb/s and 5.76 Mb/s, respectively.

IaaS (Infrastructure as a Service). Through a Cloud IaaS offer (Infrastructure as a Service, see also Cloud models), a consumer acquires from a Cloud Provider in a flexible and dynamic way computing, memory, network

resources and other fundamental calculation resources, through which the customer can develop and run arbitrary software, including operating systems and applications. The consumer does not manage or control the underlying Cloud infrastructure, but controls operating systems, memory, applications and possibly, in a limited way, some network components (e.g., firewalls).

ICT (Information and communication(s) technology). Broad area concerned with information technology, telecommunications networks and services and other aspects of managing and processing information, especially in large organizations.

IEEE (Institute of Electrical and Electronics Engineers). An organization of professional scientists aiming at promoting technology science and research in the field of electrical and electronics engineering and related fields. IEEE also works as a publishing house and standardization body.

IMS (IP Multimedia Subystem). The architecture for providing IP Multimedia services (i.e., voice, video and text) communications over IP networks. It comprises all the network elements related to signaling and media flow handling.

IMSI (International Mobile Subscriber Identity). The International Mobile Subscriber Identity is a unique identifier associated with a SIM card in cellular networks.

Interconnection. The physical and logical connection among public telecommunication networks belonging to different operators, in order to enable users of an operator to communicate with users of the same or a different operator, or to access services provided by another operator.

Internet. Global network for networks interconnection based on a common protocol suite, i.e., TCP/IP, which is the language by which connected equipment (hots) are able to communicate.

Internet of Things. The extension of Internet to the world of objects (devices, equipment, systems,..etc.), which become recognizable and acquire intelligence due to the fact that they can communicate data about themselves and access aggregate information from other object. There are many fields of applicability including: industrial applications (production processes), logistics and infomobility, to energy efficiency, remote assistance and environmental protection.

IP (Internet Protocol). A connectionless data routing protocol, used for data transmission on both public and private networks, in particular over the Internet.

IPCC (IP Contact Center). See DCC.

IP/MPLS (Internet Protocol/Multi Protocol Labeling Switching). A packet switching protocol to optimize network behaviors of mapping Layer3 (IP) end-to-end data flow to Layer2 traffic between adjacent network nodes.

IPTV (Internet Protocol Television). A system that utilizes the Internet Protocol infrastructure to transmit digital television content over a network and deliver it via a broadband Internet connection.

ISDN (Integrated Services Digital Network). A narrowband system in which several services (e.g., voice and data) may be simultaneously transmitted end to end in digital form.

ISPs (Internet Service Provider). A vendor who provides access to the Internet and World Wide Web.

ITU (International Telecommunication Union). An international organization that aims to set telecommunications standards and in the use of radio waves. Founded in 1865 in Paris, it is one of the specialized agencies of the United Nations and its head office is in Geneva.

Jitter. In electronics and telecommunications, jitter indicates the variation of one or more characteristics of a signal, such as amplitude, frequency, phase, transmission delay. The causes leading to jitter must be kept at the center of the design of electronic systems and components in which signal integrity is a strict constraint.

LAN (Local Area Network). A private network that covers a local geographic area and provides public telecommunications services as well as interconnection between personal computers.

Latency. The latency of a system can be defined as the time interval between the time the input arrives to the system and the time when its output is available. In other words, latency is nothing more than a measure of the speed of response of a system.

LCA (Life Cycle Analysis). Analysis methodology for the evaluation and quantification of environmental impacts associated with a product, process or activity along the entire life cycle from the extraction and acquisition of raw materials to the end of its life.

Local Loop. Twisted pair of copper wires through which the telephone connection reaches users; it is the foundation of traditional telephone lines and it is often called the "last mile".

LLU (Local Loop Unbundling). Service by which alternative operators other than TIM can lease the local loop, i.e., the wire connection between the TIM local exchange and the customer's premises.

LRIC (Long run incremental cost). Long run incremental cost is the cost of producing a specific additional increment of a given service in the long run (the period over which all costs are variable) assuming at least one other increment is produced. It includes all the directly assignable variable economic costs of a specific increment of service, which is usually less than the whole service.

LTE (Long Term Evolution). Represents the fourth generation (4G) of mobile phone systems. LTE belongs to the 3GPP (Third Generation Partnership Project) standard and is the latest evolution of the GSM / UMTS / HSPA standards. LTE offers a higher spectral efficiency in bits per Hertz and download bandwidth up to 150 Mbit/s per cell reducing the latency time. LTE enables services that require high interactivity (e.g., gaming, video conferencing). A further development of LTE, called "LTE Advanced", is being implemented and will allow reaching even higher bitrates in download.

Machine Learning. The ability of computers to learn without having been explicitly and preventively programmed.

MEMS (Micro-Electro-Mechanical Systems). MEMS are miniaturized devices ranging in size from a few micrometers to a few millimeters, which execute one or more monitoring, processing or actuation functions by deploying a combination of electronic, mechanical, optical, chemical or biological components integrated on a usually silicon hybrid circuit.

MGCP (Media Gateway Control Protocol). An Internet Engineering Task Force (IETF) signaling protocol allowing a bridge between classic telephone networks and Internet (i.e., IP-based) infrastructures.

MGW (Media GateWay). Equipment that processes voice and video traffic adapting codings between different technologies (e.g., from circuit to packet).

Microservices. A specific architectural model for the development of a single application as a suite of small services. Each micro-service is identified as a specialized processing process (e.g., a web server or a storage application) and is able to communicate with fast and lean mechanisms, often based on API interfaces for the description of HTTP resources. These services provide capabilities for the development of a company's business and are particularly suitable for the creation of software products according to agile methodologies. Each micro-service can be implemented and managed independently using fully automated implementation algorithms, thus ensuring maximum flexibility in the development and maintenance of applications.

MIMO (Multiple Input Multiple Output). A set of techniques aimed to increase the overall bitrate of radio access through simultaneous transmission of two (or more) different data signals on two (or more) colocated antennas, using the same frequency resources. The receiving side, also equipped with two or more antennas, is able to discriminate the different data signals by exploiting the differences in time and direction of arrival of the simultaneous signals that are caused by multipath propagation. Multipath propagation (i.e., the fact that a signal

from A reaches a point B via multiple paths due to reflection and scattering from objects (such as buildings, trees)) is a natural phenomenon affecting radio communications, which used to be seen as an impairment. Conversely, MIMO techniques exploit (using suitable signal coding) this multiplicity of paths to increase capacity.

Mobile UBB. Mobile ultrabroadband refers to the use of HSPA mobile network (evolution of the 3G network), LTE and its evolution to provide ultrabroadband connectivity.

MPLS (Multi Protocol Label Switching). See IP/MPLS.

MSC (Mobile Switching Center). Executes functions such as controlling calls, switching traffic, billing, controlling and authentication and acts as an interface with other networks.

Multicast ABR (Multicast Adaptive Bit Rate). Technology that encodes the video multicast traffic in different streams at different bitrates, used according to the channel conditions, allowing to optimize the use experience the use of network resources.

Multimedia. A service involving two or more communications media (e.g., voice, video, text, etc.) and hybrid products created through their interaction.

MVNO. (Mobile Virtual Network Operator). MVNO is a mobile communications service provider that does not own the radio spectrum or wireless network infrastructure over which the MVNO provides services to its customers.

NaaS (Network as a Service). The term NaaS (Network as a Service) refers to the provision of virtual network services by a Network Provider to a third party, such as a Service Provider not equipped with geographically networked resources, or a medium/large customer that requires basic or advanced connectivity resources on a public or shared network infrastructure. Some examples of services that refer to the NaaS model are Virtual Private Networks (VPNs), Dynamic Bandwidth Services (Bandwidth on Demand) and Mobile Network Virtualization. Today, the spread of NaaS offers is increasingly supported by flexible network virtualization models and the use of network programming and automation technologies, such as Software Defined Networking (SDN).

Naked. A digital subscriber line without an analog or ISDN telephony service. It is a line dedicated to data services.

NB IoT (NarrowBand Internet of Things). A 3GPP specification enabling the Internet of Things, based on the optimization of narrowband radio access aimed at the application of LTE technology to sensor networks. Its characteristics include few and small messages per day, high coverage range (e.g., to reach the counters in the basements), very high battery life (target 10 years), high number of connections per cell (tens of thousands) and very low cost of the modules.

Net Neutrality. The principle that Internet service providers should treat all data equally and not discriminate or charge differently based on user, content, website, platform, application, type of equipment or method of communication.

Network. An interconnected system of elements. In a telephone network, these consist of switches connected to each other and to customer equipment. The transmission equipment may be based on fiber optic or metallic cables or radio connections.

Network cap. See Price cap.

NFV (Network Function Virtualization). The NFV paradigm allows both fixed and mobile network functions to become software applications, called VNF (Virtual Network Function), which the operator can instantiate on commercial servers, exploiting virtualization technologies, separating the link between hardware and software present in the current network devices.

NGAN (New Generation Access Network). It can be realized with different technological solutions, typically fiber optic and VDSL pairs.

NGCN (Next Generation Core Network). TIM's own name for the IP backbone.

NGDC (Next Generation Data Center). A major rethink of the IT and Data Center architecture through the physical concentration and virtualization of servers to reduce the costs of maintenance/management and energy consumption, and to improve efficiency.

NGN (Next Generation Network). New generation network created by TIM to meet the demands of corporations, public administrations and citizens. The new network architecture guarantees an infrastructure designed to cover multiple offers by increasing customization levels and bandwidth availability, removing bandwidth limits and providing a huge capacity along with a wide selection of access systems.

NGNs (Non-Geographic Numbers). Non-geographic numbers are unique as they are by definition not associated with any particular geographic location (*e.g.,* premium rate services, toll free, directory assistance services).

Node. Topological network junction, commonly a switching center or station.

Node B (similar to BTS in GSM). This is the Radio Base Station in UMTS technology which, via an antenna, sends the UMTS radio signal that creates cell coverage (typically 3 cells for Node B). It also performs functions that are strictly linked to managing the radio connection.

N-play offering. Offerings to customers which bundle two or more of the following mobile and fixed services: voice, broadband and ultrabroadband data, video and TV, mobile.

NYSE. The New York Stock Exchange.

OAO (Other Authorised Operator). Operators other than the incumbent one that provide services to their customers by using the fixed access network of the incumbent.

OHSAS (Occupational Health and Safety Assessment Series). An international standard that sets the requirements that a management body for the protection of workers' health and safety must meet.

OLOs (Other Licensed Operators). Companies other than the incumbent operator that operate telecommunications systems in a national market.

OLT (Optical Line Termination). Optical element of the PON network (Passive Optical Network) that acts as an interface between the PON itself and the Backbone network. OLT is located in the central office.

ONU (Optical Network Unit). Optical element of the PON network (Passive Optical Network) which acts as an interface with the user access device or the distribution network to users. ONU is located in the distribution cabinet.

Open Source. A computer software in which source code is released under a license in which the copyright holder grants users the rights to study, change and distribute the software to anyone and for any purpose. Open-source software may be developed in a collaborative public manner.

Optical fiber. Thin glass, silica or plastic wires, building the base infrastructure for data transmission. An optical fiber cable contains several individual fibers, and each of them is capable of delivering a signal (light impulse) at almost unlimited bandwidth. Optical fibers are usually employed for long-distance communication: they can transfer "heavy" data loads protected from possible disturbances along the way. The driving capacity of optical fibers is higher than the traditional cable and copper twisted-pair lines.

OSS (Operations Support System). Methods and procedures (whether automatized or not) that directly support the daily operation of the telecommunications infrastructure.

OTN (Optical Transport Network). A technology designed to enable multiplexing of digital signals for transport over WDM links, and to achieve OAM capabilities for these signals similar to those available in SDH.

This allows a better utilization of WDM links, since it allows to fill lambdas with high rate signals (e.g., 100 Gb/s), which may contain several lower rate signals (e.g., 10 Gb/s), rather than devoting a lambda for each lower rate signal.

OTT (Over the Top) players. Operators offering contents and services on the Internet without owning the proprietary TLC network infrastructure.

Outsourcing. Entrusting an external party carrying out services and business operations. For example, it can be outsourced the planning, construction and hosting services of a telecommunications management system and, ultimately, the management of the entire telecommunications system.

PaaS (Platform as a Service). One of the three Cloud offer service models. Through a PaaS offer of a Cloud Provider, the consumer is given the opportunity to distribute applications created on their own, or acquired by third parties, on the Cloud infrastructure, using programming languages, libraries, services and tools supported by the supplier. The consumer does not manage or control the underlying Cloud infrastructure, including network, servers, operating systems, memory, but has control over the applications and possibly the configurations of the environment that hosts them.

Packet-Switched Services. Telecommunications services provided by telcos and long distance carriers that route packets of data between local area networks (LANs) in different geographical locations to form a wide area network (WAN). Packet-switching services are used to connect multiple LANs into a point-to-multipoint configuration, usually called a multipoint WAN.

Pay-Per-View or PPV. A system by which the viewer pays to see a single program (such as a sporting event, film or concert) at the moment at which it is transmitted or broadcast.

Pay TV. Subscription TV channels. To receive Pay TV or Pay-Per-View programs, a decoder must be connected to the television set, and a conditional access system is needed.

PCS (Personal Communications Services). Set of wireless communications functionalities, voice and/or data, which provide similar services such as mobile ones.

Peering. The voluntary interconnection of Internet networks, that refer to different Internet Service Providers which allows users to exchange traffic between different networks.

Penetration (market penetration). It represents the number of people (or subscriber) who acquires goods/ services of a particular brand or a particular category, divided by the population where the service is available.

Platform. It's an execution environment that includes hardware, software, application servers and other supporting tools, for the execution of programs.

POP (Point Of Presence). It is a point of access to the network (router), provided by an Internet Service Provider (ISP), able to route traffic to end users connected to POP.

POTS (Plain Old Telephone Service). Refers to the basic telephony service (single-line telephones, fixed-line services and access to public voice telephony network).

Price-cap. Then it identifies the maximum price limit, set by a regulator, at which a product/service can be sold.

PSTN (Public Switched Telephone Network). It is the first-generation telephone network and provides basic telephone service.

PTN (Packet Transport Network). A class of equipment that implements natively both SDH and Ethernet technologies, (i.e., it is able to transport and switch separately both kinds of traffic). It is used to connect smaller, peripheral central offices to larger ones, that is a use case where aside packet traffic (e.g., backhauling of broadband access and mobile sites) also legacy circuit traffic (e.g., voice, 2G backhauling) may be found.

RAN (Radio Access Network). The part of mobile network that implements radio technologies, comprised of data transport functions over air interface and control functions.

Refarming. Reassignment of frequency band of an operator of mobile networks from one technology to another for optimization reasons (e.g., UMTS900 instead of GSM900 or LTE1800 instead of GSM1800).

RNC (Radio Network Controller—counterpart of BSC in GSM). It is the equipment (or node) for the control and aggregation of 3G network.

Roaming. Agreement among two or more Mobile Operators from different Countries, under which Users can use the mobile network of other Operators participating in the agreement. The roaming service is activated for example when the terminal is used overseas and enables a mobile user to access a different network from the one to which he subscribes.

RoHS (Restriction of Hazardous Substances). European Directive No. 95/2002 that regulates the use of hazardous substances in electrical and electronic equipment, in order to contribute to the protection of human health and environment.

RTG. Also known as the Public Switched Telephone Network, is the first-generation telephone network and provides basic telephone service.

SaaS (Software as a Service). As part of the Cloud offer service models (see also Cloud entry), the SaaS model allows the consumer to use a supplier's applications and services, operating on a cloud infrastructure. The applications are accessible from different devices through a light interface (e.g., a thin client), such as an email application on a browser, or from programs with a specific interface. The consumer does not manage or control the underlying cloud infrastructure, including network, servers, operating systems, memory, and even the capabilities of individual applications, except for limited configurations intended for him.

SAR (Specific Absorption Rate). SAR is a measure of the percentage of electromagnetic energy absorbed by the human body when it is exposed to the action of an electromagnetic field at radio frequency (RF). See also EMF limits.

SDH Standard (Synchronous Digital Hierarchy). The European standard for high-speed digital transmission. It's a protocol of the physical layer used for multiplexing in time division and the subsequent digital transmission of telephony and data, in geographic networks on optical fiber, electric cable or radio link.

SDN (Software Defined Networking). A paradigm based on network virtualization that aim is to transform traditional networks into flexible and intelligent platforms to satisfy in real time the bandwidth requirements and the dynamic nature of digital applications.

SD WAN (Software Defined WAN). The SD-WAN solutions are an innovation of the traditional Wide Area Network solutions and of the Edges IP Networking, developed to offer advanced connectivity services addressed to business customers. SD-WAN solutions work agnostically with respect to the access technology, and the WAN transport network, they use dynamic routing of data on an application basis and in strong integration with multi-cloud solutions to link connectivity to certain added-value services such as WAN optimization, application monitoring and advanced security.

Service Exposure. The Service Exposure is an infrastructure that offers certain functionality, called Application Programming Interface (API), both to Third Parties (eg Business Partner), both for internal use.

Service Orchestration. Service Orchestration means a single centralized business process that can be performed by an orchestrator (e.g., a SW platform) that coordinates the interaction between various services and is responsible for their invocation and composition, as well as the management of transactions between the individual services. Service Orchestration is often compared to service choreography, which instead makes a decentralized approach to the composition of services, where each of the services participating in the choreography implements a self-consistent process / workflow.

Service Provider. The Service Provider offers to the Users (Residential or Business) that subscribe his offer, a range of contents and services.

SGT (Transit exchange interconnection level for telephone traffic). Transit Exchange for telephone traffic carriage, routing and transmission.

SGU (Local exchange interconnection level for telephone traffic). Local Exchange for telephone traffic carriage, routing and transmission. See also Central Office.

SL (Distribution Frame level for telephone traffic). See Central Office.

Shared Access. Shared access to the user's twisted pair with another TLC service provider by using separately voice and non-voice band frequency spectrum. This mode allows keeping voice telephony with an Operator (TIM or others) and ADSL service on the proprietary network of the shared access operator, i.e., not passing over the TIM network but directly through the DSLAM of the operator.

SLA. Service Level Agreements (SLA) are contractual instruments through which service metrics are defined (eg quality of service) that must be respected by a service provider (provider) towards their customers / users.

SLU (Sub Loop Unbundling). It consists in providing access to the local sub-section of the Operator copper network, in particular the section of the network between the user site and the distribution cabinet or an intermediate concentration point.

Small Cells. Small cells are low energy consumption access nodes to the radio spectrum. Smaller than the antennas, Small Cells are usually used in mobile telephony, both for the coverage of outdoor areas (squares, pedestrian streets, etc.) and for the coverage of indoor hot spots (airports, stadiums, shopping centers, stations, hospitals, university campuses, etc.).

SMART CITY. The term Smart City refers to an urban area that uses integrated ICT technologies to optimize resources in key areas: mobility, communication, economy, work, environment, administration and construction. From an infrastructural point of view, the use of available resources on the web improves economic and political efficiency and can allow social, cultural and urban development.

Smartphone. Electronic device that combines the functions of a mobile phone and a handheld computer equipped with a complete operating system.

SMART TV. The term Smart TV identifies the new generation of televisions which allows us to enjoy multimedia audio-video content (e.g., movies, TV series, music videos, gaming) through an internet connection.

SME. The small- and medium-size enterprise market (from 3 to 50 employees).

SMS (Short Message Service). Short text messages that can be received and sent through GSM-network connected cellular phones. The maximum text length is 160 alpha-numerical characters.

SOHO. The small office/home office market which consists of businesses that use telephone lines to connect to the Internet, as opposed to dedicated lines, and is made up of small businesses, generally with one or two employees, and businesses conducted out of the home.

SON (Self-Organizing Network). It is a set of technologies and architectures that allows operators to introduce, in the context of radio-mobile networks, the technological enablers for the automation of network configuration, optimization and assurance processes.

STB (Set-Top Box). A customer device able to receive TV signals from a communication network (such as broadband/ultrabroadband access network, terrestrial broadcast, satellite broadcast, etc.) and output them to TVs and other display devices (monitors, projectors, etc). It may include Conditional Access functions to handle paid content.

Tablet. A portable computer with compact dimensions whose screen can be used to write or give commands with the touch of a finger or using a specially designed stylus.

Switch—Telephone Switch. Synonymous of Telephone Exchange, i.e., network equipment used to set up and route telephone calls to the number called possibly through other switches. They may also record information for billing and control purposes.

Switch—Network Switch. Data networking equipment able to receive and forward packets using information at layer 2 of OSI (Open Systems Interconnection) model (i.e., hardware addresses of other equipment).

Synchronous. Type of data transmission in which there is permanent synchronization between the transmitter and receiver.

Tablet. Portable computer with compact dimensions whose screen can be used to write or give commands with the touch of your fingers or using a specially designed stylus.

TCO (Total Cost of Ownership). The TCO represents the global cost of an asset (e.g., an IT equipment) during its life cycle. The TCO takes into account both direct costs (hardware costs, network infrastructure, licenses) and indirect costs (management, maintenance, energy consumption).

TDMA (Time Division Multiple Access). A technology for digital transmission of radio signals between, for example, a mobile phone and a radio base station. TDMA breaks signals into sequential pieces of defined length, places each piece into an information channel at specific intervals and then reconstructs the pieces at the end of the channel.

ToIP (Telephony over IP). The term is often used as synonymous of VoIP, however it has a wider meaning since it includes advanced telephony services (such as video, messaging, possibly some call handling, etc.) beyond the basic voice communication.

TRX. Radio transceivers located in BTS.

ULL (Unbundling of the Local Loop). See LLU.

Ultrabroadband. Includes all network technologies that offer connectivity from 30Mbit/s to over 1Gbit/s, referring in particular to the peak rate and not to the average available. The definition is related to the characteristics of the fixed and mobile access network. By increasing the capacity and the speed, Ultrabroadband technologies allow quicker access from multiple users to the content available on the net, also on the move, and to take advantage of high quality video up to Ultra HD and interactive gaming.

UMTS (Universal Mobile Telecommunications System). Third-generation mobile communication standard. It consists of a broadband system in which data travels at a bandwidth of 2Mb/s, communication is faster, quality is better and multimedia contents can travel over the Net.

UMTS Cell. Geographical portion of territory illuminated by a Node B.

UMTS Channels. These enable all the customers of the cell to access both the CS (Circuit Switched) services and PS (Packet Switched) services of UMTS technology.

Unbundling. The service offered by the incumbent to the alternative operator which consists of the rental of the local loop i.e., the wire connection between the local exchange and the customer's premises, so that the alternative operator is able to connect the twisted pair from the customer to its own equipment

Universal Service. The obligation to supply basic service at an affordable price, or at special rates solely for subsidized users.

UPS (Uninterruptible Power Supply). Electrical equipment that provides continuous powering to users in case of power outage.

VAS (Value Added Services). Value Added Services provide a higher level of functionality than the basic transmission services offered by a telecommunications network. In PSTN and first generation mobile networks the basic service was telephony (switched voice calls, initially analog and later digital ones) while VAS could include data and fax transmission services, as well as call handling features such as call waiting, call forwarding, etc.. As time passed VAS based on call handling grew with further features such as toll free calling, voice virtual private networks, etc. A new class of VAS also developed in mobile networks, including message handling services such as SMS and MMS. In parallel, development of data networks turned data transmission services (initially X25, then Frame Relay, ATM, Ethernet, IP) into basic services of those networks, on top of which there may be VAS such as address translation, data virtual lines and virtual networks, traffic priority, encryption, etc.. A further category of VAS is those based on contents of Service Providers linked to the network, beginning with contents provided on telephony network, going on with contents delivered via SMS (news, weather, etc) and contents provided via browsing from mobile and fixed terminals, and arriving to video streaming contents.

VDSL (Very-high-data-rate Digital Subscriber Line). Access technology that allows providers to give clients, by means of an apparatus installed in their homes, access to voice and TV services on the traditional telephone line with speeds of up to 50 Mbps in downstream.

VDSL2 (Very-high-data-rate Digital Subscriber Line 2). "2nd generation" VDSL, able to achieve downstream speed in the range of hundreds of Mbps. Actual data rate however is largely dependent upon the distance between customer equipment and network equipment, e.g., for distances of some hundred meters the achievable rate is about 100 Mbps. For this reason network equipment is typically located in street cabinets, so to be closer to customers. A VDSL2 evolution named eVDSL (enhanced VDSL) yields achievable rates around 200 Mbps; it has been recently deployed in TIM network.

Vectoring. Transmission technology that removes mutual interference (crosstalk) between copper lines bundled in the same cable. Of particular interest is the use on VDSL / VDSL2 / eVDSL lines in view of the growing penetration of ultrabroadband services, which would make interference more perceptible. In this perspective, the use of vectoring allows to maintain the typical performances of the aforementioned technologies. The technology is placed in the ONU apparatus where to be effective it is applied on all the lines of a cable; this means that in case of SLU (Sub Loop Unbundling), that is the presence of ONUs of several operators serving the lines of the same cable, a more complex implementation is required, the MOV (Multi-Operator Vectoring) that coordinates the vectoring of the different ONUs.

Virtualization. An approach to implementation of functionality resorting only to software running on general purpose hardware generally not dedicated, as opposed to approaches resorting also to special purpose and/or dedicated hardware

VOD (Video On Demand). TV-program offering on user's request, with payment of a fee for each purchased program (a movie, a soccer match, etc.). Broadcast specifically for cable and satellite TV.

VoIP (Voice Over IP). A technology that allows transmission of voice communication over an Internet connection or another dedicated network using the Internet Protocol (IP) data networks (such as IP-based LANs, intranets or the Internet) instead of a conventional phone line.

VoLTE/ViLTE (Voice over LTE / Video over LTE). A service providing voice and video calls over IP via LTE radio access, controlled by standard ToIP architecture named IMS (IP Multimedia Subsystem). The mated naming VoLTE/ViLTE is used since the service is essentially the same for voice and video, differing only in the type of media streams that are set up. Since it is standard based, it achieves interoperability among user terminals and between terminals and networks.

VPN (Virtual Private Network). A network designed for a business customer or government agency, using the infrastructures of a carrier and providing customized services, and which operates in such a manner as to appear dedicated to the user thereof.

VRAN (Virtual Radio Access Network). An architecture applied in 4G/5G networks which implies a split of the Base Station between a Centralized Unit and a remote or distributed unit. The CU is typically placed in a more

centralized site than antennas and deals with baseband signal processing, so also the terminology BBU (BaseBand Unit) is used, while the Remote Unit is left at antenna sites to provide radio coverage and is also termed RRU (Remote Radio Unit). Given this split the CUs may be implemented as Virtual Network Functions on a suitable hardware infrastructure, from which the 'virtual' title.

For the viability of the architecture a key issue is the choice of the partition of Base Station functions between CUs and DUs, which affects the requirements on communication links CU-DU (referred to as fronthaul). In the 5G development efforts this issue has been addressed by identifying split options that are candidate for standardization.

VULA (Virtual Unbundling Local Access). A wholesale service provided by incumbent providers to alternative operators, where the incumbent provides—over its broadband access network—the transport of data traffic (a 'bitstream') between the end customer and an interconnection point where the alternative operator receives said traffic. In TIM's case, the interconnection point is located at local exchange level, aside the OLT (Optical Line Termination) i.e., the head end of optical access network.

WAN (Wide Area Network). A private network that covers a wide geographic area using public telecommunications services.

WEEE (Waste Electrical and Electronic Equipment). Waste from electrical and electronic equipment which the holder intends to dispose of as it is faulty, unused or obsolete.

White, gray and black areas. The distinction between white, gray and black areas is relevant for the assessment of state aid to support the development of ultrabroadband networks, in terms of the compatibility of the aid with respect to Community legislation. This classification is contained in the European Union Guidelines:

- white areas are areas without ultrabroadband (UBB) networks (connectivity), where private investors do not intend to invest in the next three years;
- gray areas are areas in which an ultrabroadband (UBB) network (connectivity) is present or will be developed in the next three years by a single private operator.
- black areas are areas in which at least two ultrabroadband (UBB) networks (connectivity) of different operators are present or will be developed over the next three years.

WI-FI. Wireless technology enabling data links in a limited area, generally in some hundred meters range, with speed up to tens of Mbps. Typical applications are in homes and offices as alternative to wired LAN, as well as in public services for Internet access, and also to create link between devices (e.g., between a laptop and a smartphone linked to Internet).

Wi—Max (Worldwide Interoperability for Microwave Access). A technology that allows wireless access to broadband telecommunications networks, initially defined in order to work on ranges up to tens of kilometers and speed in the tens of Mbps. It was defined by the Wi—MAX Forum, a global consortium formed in 2001 that brings together major companies in the field of fixed and mobile telecommunications and whose purpose is to develop, test and promote the interoperability of systems based on IEEE standards.

WLL (Wireless Local Loop). The means of providing a local loop equivalent (e.g., connection from customer premises to local exchange) without the use of wiring, resorting instead to wireless technologies.

WLR (Wholesale Line Rental). It is a telephony only wholesale service provided by the Incumbent to alternative operators, whereby the alternative operator gets an ULL-like service without the need to physically deploy equipment at local exchange sites. It is technically similar to Carrier PreSelection (CPS), and differs from CPS on the commercial side since the end customer is not subscribed to the incumbent's access service, nor billed for it; in this way alternative operators are able to provide to customers both access and traffic services and to produce a single bill covering both services.

xDSL (Digital Subscriber Line). It is a technology that makes use of standard telephone lines and it includes different categories including: Asymmetric DSL (ADSL), High-data-rate DSL (HDSL), Very high bit rate DSL (VDSL) and enhanced Very high bit rate DSL (eVDSL). This technology uses a digital signal at very high frequencies in order to achieve high data transfer rates.

4.6 DESCRIPTION OF PROPERTY, PLANT AND EQUIPMENT

General

As of December 31, 2018 and 2017, property, plant and equipment owned and leased are detailed as follows:

	As of December 31, 2018				As of December 31, 2017			
	Owned	Leased	Total property, plant and equipment	% of total property, plant and equipment	Owned	Leased	Total property, plant and equipment	% of total property, plant and equipment
	(millions of euros, except percentage)							
Land	250	16	266	1.6	213	16	229	1.4
Civil and industrial buildings	588	1,365	1,953	12.1	488	1,768	2,256	13.6
Plant and equipment	12,096	302	12,398	76.9	12,049	353	12,402	75.0
Manufacturing and distribution equipment	31	—	31	0.2	36	—	36	0.2
Other	358	148	506	3.1	376	138	514	3.1
Construction in progress and advance payments	928	64	992	6.1	1,054	56	1,110	6.7
Total	**14,251**	**1,895**	**16,146**	**100.0**	**14,216**	**2,331**	**16,547**	**100.0**

Land comprises both built-up land and available land.

Buildings (civil and industrial) almost exclusively include buildings for industrial use hosting telephone exchanges or for office use, and light constructions.

Plant and equipment includes the aggregate of all the structures used for the functioning of voice and data telephone services.

Manufacturing and distribution equipment consists of instruments and equipment used for the operations and maintenance of plants and equipment.

Other mainly consists of hardware for the functioning of the Data Center and for work stations, furniture and fixtures and, to a minimal extent, transport vehicles and office machines.

There are no encumbrances that may affect our utilization of our property or equipment.

REAL ESTATE (LAND, CIVIL AND INDUSTRIAL BUILDINGS)

As of December 31, 2018, the Company owned a number of buildings throughout Italy. Specialized buildings for telecommunications services account for the majority of properties both in number and in terms of book value. Such buildings house mainly exchange equipment and transmission equipment, and are used as part of our continuing telecommunications operations. General purpose properties consist chiefly of offices, depots and computer centers.

At the end of 2014, TIM launched a major real estate project, aimed at restructuring the use of space for industrial usage in a manner consistent with the evolution of next-generation networks and optimizing the number of properties used as offices through the creation of functional "centers" that adopt a modern and more efficient space utilization.

This real estate project provides for a path of restructuring, termination and renegotiation of contracts, to achieve efficiency and savings, mainly through the extension of terms and lower rents.

Properties of strategic importance have been identified, in relation to their current use and to significant investments in technology and real estate planned to support the technological evolution of the network and new ICT services.

In particular, in 2015, the Company purchased five strategic buildings and two strategic buildings were acquired in 2016. Over the 2015-2016 period the Company renegotiated and/or renewed approximately 1,100 leases. Over

half of the renegotiated property rental contracts were previously accounted for using the operating lease method, however, as a result of the changes to the relevant contracts, they have been recognized in the statement of financial position at December 31, 2016 using the financial method (Tangible assets held under finance leases). In 2017, the renegotiation process continued and approximately 150 further contracts were successfully renegotiated.

In 2018, the Company purchased an additional 12 strategic buildings and returned 18 large properties mostly per office to the property, resulting in significant economic savings.

In 2019, we plan to proceed as the previous years in the real estate project, with the aim of further reducing real estate costs.

NETWORK INFRASTRUCTURE (PLANT AND EQUIPMENT)

The TIM Group network infrastructure includes the domestic (Italian) and international fixed network, the domestic mobile network and the Brazilian mobile network. See "-4.5 Glossary of Selected Telecommunications Terms", for definitions of the technical terms used in this section.

Domestic (Italian) Fixed Network

At December 31, 2018, the domestic fixed network had the following figures:

Central Offices	approximately 10,360
Switching areas	527
Gateway areas (TDM)	33
Aggregation areas	12
Copper network	114.4 million kilometers-pair[4]
Fiber optic access/carrier network	16.4 million kilometers-fiber
Long Distance VC4	4,256
Long Distance Lambda (λ)	991 λ at 1 Gbps, 50 λ at 2.5 Gbps, 1,291 λ at 10 Gbps and 135 λ at 100 Gbps
Broadband/ADSL network	Approximately 9,700 Central Offices
Main PoP data networks	32

Fixed Voice network. The Fixed Voice Network dedicated to serving traditional voice (**TDM**) consists of 567 main local switches (**SGU**). Concerning the OLO interconnection, local switches are divided in 33 gateway areas.

Each local switch is physically interconnected to 2 out of 24 (12 pairs) Backbone Nodes ("**BBN**").

Voice over IP (VoIP) service is guaranteed by a specific control platform dedicated to consumer and business customers. The IP/TDM interworking is carried out in the transit layer.

In terms of cable infrastructures, the fixed network includes 114.4 million km of copper pairs, mainly in the distribution network, and also 16.4 million km of fiber, both in access and trunk network.

Optical fiber cables significantly increase network capacity and make it possible to offer hi-tech services based on the simultaneous transmission of various types of signal, such as voice, data and video.

Domestic Transport Network. The transport network uses the "**SDH**" (Synchronous Digital Hierarchy) or "**PTN**" technology and the optical **"DWDM"** technology (Dense Wavelength Division Multiplexing) and is based on optical fibers with systems from 155 Mbps to 100 Gbps. WDM systems realize point-to-point connections multiplying by a factor from 12 to 96 the bandwidth capacity of each optical fiber, thereby increasing the total capacity of the transport network.

The fixed long-distance transport network routes 4,256 VC-4 on the SDH Arianna, Phoenix, Phoebe, Kosmos networks. It supports also 991 λ at 1 Gbps, 50 λ at 2.5 Gbps, 1,291 λ at 10 Gbps and 135 λ at 100 Gbps on the DWDM systems and on the **"Kaleidon"** network.

[4] in 2016 TIM adopted a new copper twisted pair counting system which influenced the measures in some CO Areas.

Kaleidon is the national optical transport platform that allow to set up a completely photonic optical mesh network. Kaleidon along with its expansion (Kaleidon Evolution) supports optical channels at 40 Gbps and 100 Gbps with protection and restoration mechanisms at photonic level.

OPB (Optical Packet Backbone). The OPB is the IP backbone of TIM based on 32 POPs equipped with Terarouters.

The OPB network supports:

- Internet traffic of residential, business and Wholesale customers;
- VPN traffic (Virtual Private Network) of business customers;
- Voice traffic;
- Video traffic;
- Mobile data traffic.

At the end of 2018 in the 8 major POPs a new IP backbone (Next Generation Core Network) has been deployed, featuring a larger capacity than OPB.

OPM (Optical Packet Metro). The OPM network is the Metro-Ethernet network at regional level for traffic aggregation and transport up to the 32 IP POPs. The OPM network consists of 30 metro regional networks and support traffic from mobile and fixed access nodes. The OPM provides also Gigabit Ethernet Services for business customers (Ethernity, Hyperway, Gigabusiness and GEA on GBE optical access).

Broadband/xDSL network. The broadband access network of TIM offers hi-tech telecommunications and multimedia applications and is based on ADSL2 DSLAM technology.

In 2018, the xDSL services for residential and business customers (retail and wholesale) covers more than 99.4% of the population and have been extended to 7,673 towns**,** including S. Marino (town covered minimum at 70%). At the end of 2018, approximately 9,700 local switching areas were covered by ADSL technology.

NGAN (Next Generation Access Network). NGAN (Next Generation Access Network). In 2018 TIM continued to deploy a "**NGAN**", based on optical fiber cables. NGAN deployment started in 2009 in Milan based on Fiber-To-The-Home ("**FTTH**") architecture. Since 2012, deployment has been extended to the main cities in Italy with Fiber-To-The-Cabinet ("**FTTCab**") architecture using fiber to street cabinets equipped with VDSL2 cards. In 2016, TIM also introduced eVDSL cards to increase the UBB speed to 200 Mbps.

The NGAN coverage in FTTCab is approximately 80% of reached households at the end of 2018 (approximately 19,400,000 households, through approximately 5,100 distribution central offices).

Approximately 113,500 cabinets NGAN are reached with fiber optic cables and for approximately 103,100 of these cabinets the UBB services are available for customers; approximately 1.400 ONU-cab are installed in Central Office (FTTE architecture) to provide UBB services to customers with copper accesses without cabinet.

With the aim of improving ultrabroadband service to 1 Gbps in 2015, TIM began to bring FTTH to the 30 main cities, their neighboring cities, and a further 59 BUL[5] cities in south of Italy. The total of cities reached by 1Gbps services at the end of 2018 is 118.

The households in FTTH are nearly 3,500,000, with a coverage of about 14,2% at the end of 2018

Domestic (Italian) Mobile Network

The domestic mobile network consists of:

- GSM network (2G: second generation network);

[5] BUL is an Italian acronym (Banda UltraLarga) referring to a public funding project aimed to deploy ultrabroadband infrastructures in 7 regions in South of Italy.

- UMTS network (3G: third generation network); and
- LTE network (4G: fourth generation network).

On December 31, 2018, TIM domestic mobile network had the following figures:

GSM/EDGE network

- 14,286 BTS (Base Transceiver Station) GSM radio station (14,352 BTS at the end of 2017): -0.5%; approximately 900 of them are μBTS;
- 435,141 radio channels (437,216 at the end of 2017): -0.5%
- 94 BSC (Base Station Controller);
- GSM Core Network: since the Circuit Switched Core Network is common to GSM and UMTS (Dual Access architecture), its description is given below.

UMTS/HSPA network

- 21,118 node B UMTS radio base station (20,728 node B at the end of 2017): +1.9%;
- 3,090,355 radio channels (3,057,396 radio channels at the end of 2017): + 1.1%;
- 118 RNC (Radio Network Controller);
- GSM/UMTS Core Network: 50 MSC-server (Mobile Switching Center/Gateway), 88 access MGW (Media Gateway), 17 transit MGW, 4 IP STP (Signalling Transfer Point), 8 TSC-server (Transit Switching Center), 42 HLR (Home Location Register), 4 GGSN (Gateway GPRS Support Node).

In 2018, the HSDPA at 42 Mbps coverage level reached about 89% of the population. Given the wider coverage reached by LTE and the focus on 5G implementation, further HSPA development might receive a lower priority.

LTE network

TIM acquired frequency blocks on 800 MHz, 1800 MHz and 2600 MHz through an auction in September 2011.

The three bands are used for LTE deployment to provide ultrabroadband services to mobile customers. Moreover, in September 2015, TIM acquired a frequency block in the 1500 MHz band, specifically devoted to mobile ultrabroadband. In 2016, TIM initiated deployment of this new layer.

In September 2018, TIM acquired frequency blocks in the bands 700 MHz (available from July 2022), 3600 MHz, 26.5 GHz (both the latter available from January 2019) for 5G deployment.

At the end of 2018, LTE network coverage is more than 98% of the national population.

- 23,683 enode B (19,358 at the end of 2017) +22.3%; approximately 950 of them are micro with remote radio unit;
- LTE core network is undergoing a technological upgrade and currently includes: 18 (17 physical nodes + 1 virtual node) SPGW (Packet Data Network/Serving Gateway), 12 MME[6] (Mobility Management Entity) all using triple access 2G/3G/4G technology, 12 (6 physical + 6 virtual nodes) HSS (Home Subscriber Server) Front End and 15 CUDB (Centralized User Database) according to Data Layered Architecture, 3 Mobile Broadband Virtual Policy Manager.

As of the end of 2018, the IMS core Network includes 5 (4 physical nodes + 1 virtual node) CSCF (Call session Control Function), 5 (4 physical nodes + 1 virtual node) MTAS (Multimedia Telephony Application Server) and 4 (2 physical + 2 virtual nodes) VoLTE Policy Manager for handling voice services on LTE (VoLTE).

[6] An additional MME is devoted to the GSM-On-Ship service

International Fixed Network

TI Sparkle provides connectivity services (voice, mobile data, IP and managed bandwidth) and Cloud and Data Center services (Infrastructure as a Service—IaaS, Disaster Recovery, enhanced colocation) to national and international wholesale customers and to multinational corporates (MNCs) relying on an international network made of a proprietary cross-border backbone and bilateral connections.

TI Sparkle international backbone spans 450,000 km, covering all of the major regions worldwide and connects over 500 international voice operators. The cross-border backbone integrates 4 regional networks:

- Pan European backbone ("**PEB**");
- Latin American backbone;
- Mediterranean backbone;
- USA backbone.

In detail:

- **Pan European Backbone.** Proprietary high speed optical network built over a fiber optic backbone spanning the main European countries: Italy, France, United Kingdom, Netherlands, Belgium, Germany, Switzerland, Austria, Spain, Czech Republic, Slovakia and Romania. The overall length is about 45,000 km;
- **Latin American backbone.** High-capacity backbone based on fiber optic ring networks, both terrestrial and submarine, with an overall length of about 36,000 km, including the Miami-New York section. The ring connects the main cities of South and Central America to North America;
- **Mediterranean backbone.** Submarine ring network with a highly reliable configuration complemented by terrestrial fiber extensions from Istanbul and Athens to Sofia. The total length is about 10,000 km and connects the major markets of the Mediterranean and Balkans area: Italy, Greece, Cyprus, Turkey, Israel and Bulgaria;
- **USA backbone.** High-capacity terrestrial backbone with POPs in: Newark, New York, Miami, Jacksonville, Ashburn, Chicago, Palo Alto, Los Angeles and Dallas.

The TI Sparkle network is an integrated, multi-service backbone based on an IP-MPLS core handling differentiated classes of services. The transport layer is based over DWDM, with 10, 40 and 100Gbps optical lambdas while voice services are provided by Class 4 switches. Traffic protection is implemented by MS SPRING, SNCP, OTN, MSP 1+1 and "meshed" technologies.

In 2018, the introduction of the Huawei 9800 OSN platform (Optical Switching and Networking) for 10/40/100GE has been completed, capacity for back-bone in Italy of 1.2T and in Europe 2.2T have been realized. The range of capacity services in the POPs of Fucino (IT), Secaucus (NJ), Amsterdam (NL) (over multiple sites), New York DRT, Newark (NJ) and Singapore Global Switch has been extended.

With respect to the transport network, in 2018 volumes of about 80T have been made on the 100G ASN OTN network between the main lines in Italy and in Europe. The 100G DWDM network on the Salzburg—Vienna route has been extended. The divestment of the PEB DWDM network of 2001 continued.

The construction of the new metro ring in Rome has been completed, connecting the PoP of the Namex with the PoPs of the Sparkle optical backbone of North Rome and South Rome. The new meter ring has a maximum capacity of 96 optical channels at 10G / 100G, has an initial capacity of 2x100G, 4x10G and 4x1G.

The new metro rings have been completed in Amsterdam, Singapore and New York, with the same type of technology as in Rome. In Amsterdam, the metro ring connects the PoPs of DRT, Equinix, InterXion, Globalswitch and Evoswitch. In New York, the metro ring connects the PoPs of Newark, DRT 111-8th Ave and DRT 60 Hudson Street. In Singapore, the metro ring connects the PoPs Tuas, Equinix and Global Switch. Following the installation of the metro rings, efficiency works were carried out with savings in operating costs.

In Milan, the swap of the old Alcatel technology was completed on the north branch of the existing metro ring that links the PoPs of Milan Malpaga and Milano Caldera, introducing the same technology chosen for the other metro rings.

New Infinera XT3300 devices have been introduced to upgrade the IP backbone in the Balkans, activating a capacity of 600G on the Sofia / 3DC-Istanbul-Athens-Sofia/TLP branch and 1.2T on the Sofia/3DC-Sofia/TLP line.

The upgrade of the Catania-Istanbul link on the Infinera network was completed, with the aim of replacing the old ASN and Huawei technologies with Infinera and making available, in addition to the 36 x10G existing between Istanbul and Catania, even 4x10G and 8x100G on the same route.

The Italian back-bone contracts were renewed, bringing the expiration to 2035.

Completed the upgrades on the ITALIA-MALTA bilateral submarine cables (2x100G); the upgrade # 5 of the Sea-Me-We4 consortium cable was also delivered, equal at 20.2 Mln MIU*km, equivalent to a capacity of 3x100G from Singapore/Tuas to Palermo. The Network Administrator (NA) Sea-Me-We3 has distributed to the Parties the capacity deriving from the upgrade 5.1, to Sparkle have been assigned 1,392,076 MIU* Km. The NA of the SMW4 has released to the Parties the capacity deriving from the second reduction of capacity reserved by agreement in MARA (Mutual Aid Restoration Agreement) between SMW3 and SMW4, Sparkle received 36,558 MIU * km in its Reserve Capacity.

The 2x100G upgrade of the ring between Singapore /Tuas and Singapore /Equinix was completed.

With respect to IP backbone, On the new metro ring in Rome, 2x100G were activated to connect the router to the Namex with the routers of Milan (Caldera and Malpaga).

The new POP was created in the USA in the city McAllen, with the 100G McAllen-Miami and McAllen-Dallas interconnection, reusing the Juniper MX960 router originally purchased for the Vietnam project.

The London Slough POP has been abandoned. Also in London was completed the 1T upgrade of the matrices and the insertion of the 8x100GE cards on the Huawei NE40 core routers.

The Juniper MX480 router recovered from London Slough was used to create the new Ho Chi Min POP in Vietnam.

The upgrade of the Cisco CRS8 in Hong Kong was completed to increase performance and to allow the inclusion of the 14x10GE cards required for ports expansion.

The migration of the circuits from the obsolete Cisco 12000 to the Cisco CRS has been completed in the Palermo POP, the Cisco 12000 routers have been abandoned in the following POPs: Catania, migrating the circuits on the Cisco ASR9010, Madrid, replaced with a Juniper MX104 recovered from Frankfurt and Miami, migrating the circuits on SDH cards recovered from Frankfurt and installed on the Juniper MX960; the obsolete 4x10GE cards of the Juniper MX960 routers of Rome North and Stockholm were dismantled and the circuits were migrated on 16x10GE boards recovered from other POPs.

New 4x100GE cards have been installed for Juniper MX960 Paris Equinix, the back-bone Frankfurt-Vienna ITX and 200G in Amsterdam EvoSwitch—Milan have been expanded to 100G to support 100G customer activations.

The Roma POP of Namex replaced an obsolete Cisco 4900M device, used for aggregation of GigaEthernet accesses, with a new Juniper MX80,

Have been inserted expansion cards of 100GE on the Juniper MX960 routers in Amsterdam, Paris, Sofia, Singapore, Miami and New York. On these last two sites the processor upgrades requested for performance increase were also performed.

In Singapore, a second POP IP was activated at Global Switch with a Juniper MX960.

The attestation of all access circuits of the Akamai caches Milan Malpaga has been completed, migrated from the TIM network to the Sparkle network.

The installation of the new Juniper MX960 router was completed in the Marseille POP within the new Interxion spaces. The project responds to the requirement presented by Maroc Telecom in the tender awarded to Sparkle, to certify incremental capacity on a third router in the same POP.

The economic competition between Juniper and Cisco for the new high-density (3T / slot) routers installed on the New York core, the Milan and Frankfurt edge was completed. The tender was awarded to Juniper with the new PTX10008 products, and the installation of the first PTX10008 in the Milan Caldera POP was completed.

With reference to TI Sparkle offer for Data Center / Cloud & services for multinational corporate the new hyperconvergent platform based on Nutanix technology was implemented at the Metamorfosi—Athens datacenter for the fast, efficient and scalable delivery of IaaS services. A virtualized network layer was also introduced, based on Vmware NSX technology, to guarantee maximum isolation between workloads of different tenants and, at the same time, an efficient and fast delivery. The brokerage and automation platform, based on ODIN technology, has entered production and already hosts customers who purchase workloads on AWS via SSO; the development of the connector towards internal platforms based on Vmware vCloud Director is underway. Finally, computing and networking platforms (servers and routers), now obsolete and out of support, have been replaced in the data center of Yenibosna, Istanbul.

Work has been completed at the Catania datacenter for the implementation of the ICT Control Room, already operational in the implementation and assurance of the automation tools, programmability and network virtualization, as well as for the centralized monitoring of infrastructures for the provision of Cloud services.

The new firefighting system for the Data Center in Greece at Metamorfosi was completed, and the new air conditioning and power plant were completed.

For the provision of services to corporate companies, we note the expansion of the Giga Ethernet interface of IP VPN and Carrier Ethernet services at Frankfurt Interxion and Itenos, Rome and London through satellite technology.

Furthermore, the migration of the European MNCs backbone to a new transmission infrastructure was completed, including the PoPs in Milan, Paris, London and Frankfurt, with 10G band and dedicated routing to ensure improved performance for Top customers. Edge infrastructures have been renewed at the PoP in Bucharest of the Sparkle retail network, replacing the phase out technologies with new future proof routers for L2 and L3 VPN services. The new Edge layers are also completed in Madrid, Prague and Brussels and the 1/10 GE delivery activities are started in Milan, Frankfurt, Miami and Palermo.

For the provision of automation and virtualization services, the POD NFV-I physical installation was completed at DC Catania with the configuration of the OpenStack and the VNF delivery, the first use-case of vIMS signaling applications.

The server and switching infrastructure delivery phase was started for the PODs in Athens, Miami and Newark.

The activities of PoC for the study of SD-WAN solutions and Automation Engine for the what-if simulation of MPLS network traffic have been completed.

In the field of network automation, the Bandwidth on Demand Carrier Ethernet modeling and API according to the MEF standard was completed on the Network Service Orchestrator. The SCI & DCI Ethernet Suite services framework for Northbound communication was defined in this context.

With respect to voice and mobile, the VoIP call handling capacity has been increased (+ 32 thousand concurrent sessions) thanks to the network integration of a new SBC node at the Newark site and Milan. The Roaming VAS platform for Outbound Roaming Solution service (dual IMSI) was also adapted to support the expected traffic growth.

The new system for monitoring of VoIP traffic was completed, able to acquiring also the "average" component of calls and exporting elementary data to "Big Data" systems, for the creation of internal reports and to customers.

The software release of the SBC equipment has been adapted, so as to guarantee the continuity of the service on the SBC model 4500SD devices.

The functionality that allows the dynamic allocation of the numbering resources associated with the SIM cards of the users of the "Outbound Roaming Solution" service has been introduced on the "Roaming VAS" platform.

Networking activities were launched for the STP and DRA nodes in Netnumber technology to support international roaming signaling services.

The GTP Proxy platform was added to the network to increase the flexibility and optimize the management of the roaming data traffic of customers of the "Outbound Roaming Solution" service.

The introduction of a signaling traffic analysis tool to support international roaming has been completed. The purpose of this tool is to promptly identify sequences of signal messages generated artificially for the purpose of carry out fraudulent actions against mobile operators.

In 2018, the installation of the DWDM equipment for the lighting of the terrestrial fiber between the landing station of the GlobeNet submarine cable in Tuckerton (NJ) and the POP Miami has been completed, extending up to the Seabras-1 cable landing station in Wall.

A fiber ring in Florida that connects the landing station in Boca of the Globenet submarine cable (that of the submarine Cable SAM1 (Telxius) and the POP of Miami has been completed).

A transmission system was installed in the city of Cartagena (Colombia), the new PoP responds to the growing demand for capacity services in Colombia, providing local and international network operators, ISPs, content providers and OTT connectivity solutions up to 100G via the of Managed Bandwidth services.

The NJFX (New Jersey Fiber Exchange) Datacenter was added to the Sparkle network where, through the colocation equipment, we can offer 100G / 10G services and extend the IP services available to the NY POP.

The adjustment of the PoP of Sao Paulo c/o Equinix was completed, for the offer of 10G/100G services.

The upgrade of 600G of the submarine cables SAC and SAM1 and of 800G of the relative land backhaul in Brazil and Florida was realized for the activation of capacity between São Paulo and Miami.

Brazilian Network

Infrastructure is one of the strategic pillars for TIM Brasil group and efforts continue to offer more and better services. Recent changes in consumption patterns, as well as increasing demand for quality require a structured network expansion plan, supported by more robust technical analysis regarding consumption patterns and customer needs, as well as a transformation of corporate culture.

TIM Brasil capital expenditure for 2018 was almost 4 billion reais, of which more than 85% were dedicated to infrastructure (network and information technology) in order to guarantee the expansion of coverage and capacity, aiming to meet growing data traffic. Infrastructure improvements and growth are supported by various projects, among which are the expansion of fiber optic network, densification of sites, infrastructure virtualization VoLTE deployment, refarming of radiofrequency and the aggregation of carriers in two or three frequencies, depending on geographic location.

In the scope of spectrum usage, TIM Brasil continues its refarming project, aiming at achieve greater efficiency and better performance. In fiber, TIM Brasil continues to work on its network expansion project, to support the ultrabroadband converging network, increasing the availability of FTTH and FTTS.

TIM Brasil achieved, at the end of 2018, 841 *Biosites*, which are sustainable, cheaper structures that are easier to install and have no visual impact on cities. In the context of big data, TIM Brasil is constantly evolving its analytical tools for a more complete and proactive approach, aiming to achieve a more efficient deployment of investments.

TIM Brasil's coverage reached 93% of the urban population with its 4G network, achieving 3,272 cities with such technology, a 9.0% increase when compared with the same period of 2017, maintining it leadership in 4G coverage. To support this expansion, the number of 4G sites (e-NodeB elements) grew more than 38%, reaching almost double the number of 3G sites.

This significant expansion in 4G is supported by the implementation of spectrum refarming process, which uses the 1.8 GHz and 2.1 GHz bands and reorganizes the use of frequencies according to availability, redirecting them to the new technology (from 2G to 4G). This practice enables coverage optimization by deploying capital expenditures more efficiently.

Additionally, TIM Brasil continues to develop its LTE network through the use of the new 700MHz frequency, which is available in 1,426 cities. The 700 MHz band enables greater signal reach with higher download and upload speed, as well as lower latency, providing a significant improvement in customer experience. As it is a lower frequency, coverage reach can be four times greater when compared to 2,600 MHz band and provides greater penetration in indoor environments.

The network expansion on several fronts allows TIM Brasil to maintain its innovative approach and explore new technologies, such as VoLTE (Voice over LTE network) and Wireless-To-The-X (WTTX). TIM Brasil was the first operator in Latin America to offer VoLTE, a technology that allows calls traditionally carried out through circuits and that is already available in more than 2,500 cities, to evolve into IP data network, ensuring efficiency and stability. Other benefits to users include simultaneous navigation trough 4G, reduced battery consumption and shorter connection establishment time.

The use of WTTX technology that allows the commercialization of wireless broadband via LTE network, enabled TIM Brasil to increase its portfolio of residential solutions and it is already available in 123 cities. WTTX emerges as a quality choice to serve regions with underserved demand for broadband due to the lack of offers and to a fixed network infrastructure that is still under development. The user can navigate with stability and simple activation through a plug-and-play model. The release of this service and expansion was only possible due to TIM Brasil's investments in the 4G network.

With respect to corporate culture, new technologies and customer demands have resulted in a rupture in the traditional model of telecommunications operators. In light of these developments, TIM Brasil seeks to develop, motivate and engage its employees so that they can perform in a dynamic, innovative and collaborative environment, based on an agile and flexible operating model.

Item 4A. Unresolved Staff Comments	

Item 4A. UNRESOLVED STAFF COMMENTS

None.

Item 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The following discussion should be read in conjunction with the Consolidated Financial Statements included elsewhere in this Annual Report. Such financial statements have been prepared in accordance with IFRS as issued by the IASB.

5.1 CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analyses of our financial condition and results of operations is based upon our Consolidated Financial Statements, which have been prepared in accordance with IFRS as issued by the IASB (designated as "**IFRS**"). Our reported financial condition and results of operations as reported under IFRS are based on the application of accounting methods which involve the use of subjective assumptions and estimates that underlie the preparation of our financial statements. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily available. Actual results could differ, even significantly, from these estimates owing to possible changes in the factors considered in the determination of such estimates. Estimates are reviewed periodically.

In the absence of a Standard or an Interpretation that specifically applies to a particular transaction, management carefully considers subjective valuation techniques and uses its judgment as to the accounting methods to adopt with a view to providing financial statements which faithfully represent the economic substance of the transactions, are neutral, prepared on a prudent basis and complete in all material respects and in accordance with IFRS.

Since our selection and application of accounting policies involve judgments and other assumptions affecting the application of those policies, reported results are sensitive to changes in conditions or assumptions of management and these are factors to be considered when reading our Consolidated Financial Statements. We believe the critical accounting policies described below involve the most significant subjective assumptions and estimates used in the preparation of our Consolidated Financial Statements under IFRS.

Revenue recognition

Revenues are the gross inflows of economic benefits during the period arising in the course of the ordinary activities of an entity. Amounts collected on behalf of third parties such as sales taxes, goods and services taxes and value added taxes are not economic benefits which flow to the entity and do not result in increases in equity. Therefore, they are excluded from revenues.

The process underlying recognition of revenues follows the steps set out in IFRS 15:

- **identification of the contract**: takes place when the parties approve the contract (with commercial substance), identify the respective rights and obligations, this means that: the contract must be legally enforceable, the rights to receive goods and/or services and the terms of payment can be clearly identified and the Group deems receipt of payment as probable;
- **identification of the performance obligations**: the main identified performance obligations, namely the promises to transfer goods and services that are distinct, consist of services rendered (including voice and data traffic and ICT solutions) to retail customers, services rendered to wholesale customers and sale of products;
- **determination of the transaction price**: the total amount that has been contracted with the other party regarding the entire contractual term; the Group established that the contractual term is the one arising from the contractual constraints among the parties or, in the absence of such constraints, by convention, equal to one month;
- **allocation of the transaction price to the performance obligations**: the allocation is made proportionately to the respective stand-alone selling prices calculated based on the list prices (if present) or estimated by applying an appropriate margin to the cost of purchase/production of the good/service.

  Transaction price related to activating the connectivity service is not a performance obligation; therefore it is allocated to the contractual performance obligations (typically to services).

For offerings which include the sale of devices and service contracts (bundle offerings), the Group allocates the contractual transaction price to the performance obligations of the contract, proportionately to the stand alone selling prices of the single performance obligations;

- **recognition of revenues**: revenues are stated net of discounts, allowances, and returns in connection with the characteristics of the type of revenue:

  - ***Revenues from services rendered***

    Revenues from services rendered are recognized in the separate income statements according to the stage of completion of the service, that is based on actual consumption.

    Traffic revenues from interconnection and roaming are reported gross of the amounts due to other TLC operators.

    Revenues for delivering information or other content are recognized on the basis of the amount invoiced to the customer, when the service is rendered directly by the Group. In the event that the Group is acting as agent (for example non-geographic numbers) only the commission received from the content provider is recognized as revenue.

    Revenues from prepaid traffic are recorded on the basis of effective consumption. Deferred revenues for traffic already collected but not yet consumed are recorded in "Trade and miscellaneous payables and other current liabilities" in the consolidated statements of financial position.

    Revenues for services rendered are generally invoiced and collected monthly (for retail customers) or in 40-60 days (for wholesale customers).

  - ***Revenues from sales***

    Revenues from sales (telephone and other products) are recognized on delivery, which represents the time of control transfer to the customers. The devices sold separately from services are invoiced at the time of delivery; collection takes place on demand or based on installment plans (up to 48 monthly installments). The devices sold as part of bundle offerings are invoiced at the time of delivery and usually collected in 24 monthly installments.

    Some contracts (typically the sale of equipment by instalments) include an implicit financial component, which, if significant, results in a reduction in revenues recognized at the time of sale and the subsequent recognition of financial income at the time of collection of the related instalments; this component is determined by using a discount rate that reflects a hypothetical customer loan transaction at the contract date reflecting the creditworthiness by type of customer. The Group avails itself of the practical expedient of not recognizing said component if it is insignificant or the collection extension is less than 12 months.

Recognition of revenues may result in the recognition of a contract asset or liability. In particular:

- **Contract assets** represent the right to consideration in exchange for goods or services that the Group has transferred to a customer when that right is conditioned on something other than the passage of time.
- **Contract liabilities** represent the obligation to transfer goods or services to a customer for which the Group has received consideration (or the amount is due) from the customer.

  Contract costs (incremental costs of obtaining a contract and costs to fulfill a contract; for example, the activation costs and the costs for sales network commissions) are extended and recognized in the consolidated income statements based on the expected term of the contractual relationship with the customers (on average, 3 years for the mobile business and 7 years for the fixed business). The TIM Group makes use of the practical expedient provided for by IFRS 15, which allows the incremental costs of obtaining a contract to be recorded in full in the consolidated income statement, if the period of deferral does not exceed 12 months.

Allowance for doubtful accounts

The impairment of trade receivables and contract assets is carried out through the simplified approach, which involves estimating the expected loss over the entire life of the receivable at the time of initial recognition and in

subsequent valuations. For each customer segment, the estimate is mainly made by determining the average expected unrecoverable amount, based on historical-statistical indicators, adjusted if necessary using forward-looking elements. For certain categories of receivables with specific risk elements, specific valuations are carried out on individual credit positions.
If the financial condition of our customers were to deteriorate, our actual write-offs might be higher than we estimate.

Accounting for tangible and intangible non-current assets

Accounting for tangible and intangible non-current assets involves the use of estimates for determining fair value at the acquisition date in the case of assets acquired in a business combination and the expected useful lives of assets with a finite useful life. The determination of the fair values of assets, as well as the useful lives of the assets is based on management's judgment. Changes in the economic conditions of the markets in which we operate, technology and competitive forces could significantly affect the estimated useful lives of these assets and may lead to a difference in the timing and amount of depreciation and amortization expense.

Acquisition accounting, goodwill and purchase price allocation

We have entered into certain acquisitions and in the future may make further acquisitions. The calculation of the purchase price, and the subsequent allocation of that purchase price to the fair value of the assets acquired and liabilities assumed, is critical due to the long-term impact on the separate consolidated income statement.

Under IFRS, we are required to perform a purchase price allocation and, consequently, as part of that allocation, all consideration, including the fair value of exchanged shares, shall be valued. When equity instruments are issued as part of the consideration, under IFRS we measure them at their fair value as of the date of exchange.
The purchase price is then allocated to the fair value of the assets acquired and liabilities assumed.

The purchase price allocation requires that all assets and liabilities be recorded at fair values which requires significant estimates and judgments to be made. A change in any of these estimates or judgments could change the amount allocated to the assets and liabilities. The resulting change in the purchase price allocation to assets or liabilities has a direct impact on the final amount of the purchase price that is allocated to goodwill.

If actual results differ from these estimates, or we adjust the estimated economic useful lives, operating results could be significantly affected by these estimates and judgments which involve:

- the definition of the purchase price;
- the identification of the assets acquired and liabilities assumed in the acquisition;
- the valuation of these assets and liabilities in the purchase price allocation; and
- the assessment of whether selected assets have a finite or indefinite useful life.

These could have a significant impact on both the level of total goodwill and ultimately on the separate consolidated income statement.

Impairment of assets

The determination of impairment of intangible and tangible assets involves the use of estimates that include, but are not limited to, the cause, timing and amount of the impairment.

- ***Goodwill.*** Goodwill is tested for impairment at least annually or more frequently whenever events or changes in circumstances indicate that goodwill may be impaired, as set forth in IAS 36 (*Impairment of Assets*); however, when the conditions that gave rise to an impairment loss no longer exist, the original amount of goodwill is not reinstated.

  The test is generally conducted at the end of every year so the date of testing is the year-end closing date of the financial statements. Goodwill acquired and allocated during the year is tested for impairment at the end of the year in which the acquisition and allocation took place.

To test for impairment, goodwill is allocated, at the date of acquisition, to each cash-generating unit or groups of cash-generating units which is expected to benefit from the acquisition.

Allocation is made to the lowest level at which goodwill is monitored for management purposes and that lowest level is not larger than the operating segment determined in accordance with IFRS 8 (*Operating Segments*).

If the carrying amount of the cash-generating unit (or group of cash-generating units) exceeds the recoverable amount, an impairment loss is recognized in the separate consolidated income statement. The impairment loss is first recognized as a deduction of the carrying amount of goodwill allocated to the cash-generating unit (or group of cash-generating units) and then only applied to the other assets of the cash-generating unit in proportion to their carrying amount, up to the recoverable amount of the assets with a finite useful life. The recoverable amount of a cash-generating unit (or group of cash-generating units) to which goodwill is allocated is the higher of fair value less costs to sell and its value in use.

In calculating the value in use, the estimated future cash flows are discounted to present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. The future cash flows are those arising from an explicit time horizon between three and five years as well as those extrapolated to estimate the terminal value. The long-term growth rate used to estimate the terminal value of the cash-generating unit (or group of cash-generating units) is assumed not to be higher than the average long-term growth rate of the segment, country or market in which the cash-generating unit (or group of cash-generating units) operates.

The value in use of a cash-generating unit denominated in a foreign currency is estimated in the local currency by discounting cash flows to their present value on the basis of an appropriate rate for that currency. The present value obtained is translated to Euro at the spot rate on the date of the impairment test (in the case of the TIM Group, the date of the financial statements).

Future cash flows are estimated by referring to the current operating conditions of the cash generating unit (or group of cash-generating units) and, therefore, do not include either benefits originating from future restructuring for which the entity is not yet committed, or future investments for the improvement or optimization of the cash-generating unit.

For the purpose of calculating impairment, the carrying amount of the cash-generating unit is established based on the same criteria used to determine the recoverable amount of the cash-generating unit, excluding surplus assets (that is, financial assets, deferred tax assets and net non-current assets held for sale) and includes the goodwill attributable to non-controlling interests.

After conducting the goodwill impairment test for the cash-generating unit (or groups of cash-generating units), a second level of impairment testing is carried out which includes the corporate assets which do not generate positive cash flows and which cannot be allocated by a reasonable and consistent criterion to the single units. At this second level, the total recoverable amount of all cash-generating units (or groups of cash-generating units) is compared to the carrying amount of all cash-generating units (or groups of cash-generating units), including also those cash-generating units to which no goodwill was allocated, and the corporate assets.

For further details, see "Note—Goodwill" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

- ***Intangible and tangible assets with a finite useful life***. At every closing date, the Group assesses whether there are any indications of impairment of intangible and tangible assets with a finite useful life. Both internal and external sources of information are used for this purpose. Internal sources include obsolescence or physical damage, and significant changes in the use of the asset and the economic performance of the asset compared to estimated performance. External sources include the market value of the asset, changes in technology, markets or laws, trend in market interest rates and the cost of capital used to evaluate investments, and an excess of the carrying amount of the net assets of the Group over market capitalization. When indicators of impairment exist, the carrying amount of the assets is reduced to the recoverable amount. The recoverable amount of an asset is the higher of fair value less costs to sell and its value in use. In calculating the value in use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market

assessments of the time value of money and the risks specific to the asset. Where it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the cash-generating unit to which the asset belongs. Impairment losses are recognized in the separate consolidated income statement. When the conditions that gave rise to an impairment loss no longer exist, the carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, up to the carrying amount that would have been recorded had no impairment loss been recognized. The reversal of an impairment loss is recognized as income in the separate consolidated income statement.

The identification of impairment indicators, the estimation of future cash flows and the determination of fair values of assets or groups of assets (or cash-generating units) require management to make significant judgments including expected cash flows, applicable discount rates, useful lives and residual values. These estimates can have a material impact on fair value and the amount of any write-downs.

Financial assets

Financial assets include in particular investments, some of which are publicly traded and have highly volatile share prices. Generally, an impairment charge is recorded when an investment's carrying amount exceeds the present value of its estimated future cash flows. The calculation of the present value of estimated future cash flows and the determination of whether an impairment is other than temporary involve judgments and rely heavily on assessments by management regarding the future development and prospects of the investee company. In determining the value, quoted market prices are used, if available, or other valuation methodologies. To determine whether an impairment is other than temporary, we consider the ability and intent to hold the investment for a reasonable period of time to ascertain whether a forecasted recovery of fair value exceeds the carrying amount, including an assessment of factors such as the length of time and magnitude of the excess of carrying value over market value, the forecasted results of the investee company, the regional economic environment and state of the industry. Future adverse changes in market conditions, particularly a downturn in the telecommunications industry, or poor operating results could result in losses or an inability to recover the carrying amount of the investment, which could result in impairment charges.

Derivative financial instruments

We have entered into several different types of derivative contracts in order to manage our exposure to exchange rate and interest rate risks and to diversify the parameters of debt so that costs and volatility can be reduced to within pre-established operational limits. The changes in the fair value of derivatives which do not qualify for hedge accounting, fair value hedge derivatives and the ineffective portion of cash flow hedge derivatives are recognized in the separate consolidated income statement in the period of change. The gain or loss on the effective portion of qualifying cash flow hedges is recognized directly in a specific equity reserve. The cumulative gain or loss is removed from equity and recognized in the separate consolidated income statement at the same time the hedged transaction affects the separate consolidated income statement. The assessment of the fair value of a derivative contract requires the use of quoted market prices, banker price quotations, price quotations for similar instruments traded in different markets and, where applicable, pricing models. Pricing models and their underlying assumptions impact the amount and timing of unrealized gains and losses recognized. We rely on these pricing models when external fair values are unavailable. The estimates regarding future prices require estimating several factors, including interest rates, currency values and cash flows. Prices realized in the future could differ from these estimates, therefore producing different financial results.

Provision for employee severance indemnity

Employee severance indemnity, mandatory for Italian companies pursuant to art. 2120 of the Italian Civil Code, is a deferred compensation and is based on the employees' years of service and the compensation earned by the employee during the service period.

Under IAS 19 (*Employee Benefits*), the employee severance indemnity is considered a "Defined benefit plan". From January 1, 2007, Italian Law provided employees with the choice to direct their accruing indemnity either to supplementary pension funds or leave the indemnity as an obligation of the Company. Companies that employ at least 50 employees should transfer the employee severance indemnity to the "Treasury fund" managed by INPS, the Italian Social Security Institute.

Consequently, the Group's obligation to INPS and the contributions to supplementary pension funds take the form, under IAS 19, of a "Defined contribution plan".

The obligation for the employee severance indemnity classified as a defined benefit plan is determined in accordance with actuarial methods. In the event that changes in assumptions are required, the future amounts of the post-employment benefit may be materially affected. A critical assumption to this accounting is the discount rate. Other assumptions include factors such as expected retirement date, mortality rate and estimates of inflation.

Provisions and contingent liabilities

We exercise considerable judgment in determining our exposure to and recognizing provisions for contingent liabilities related to pending litigations or other outstanding claims subject to negotiated settlement, mediation, arbitration or government regulation as well as other contingent liabilities.

Judgment is necessary in assessing the likelihood that a pending claim will succeed or a liability will arise and to quantify the possible range of the final settlement. Provisions are recorded for liabilities when losses are considered probable and can be reasonably estimated. Because of the inherent uncertainties in making such judgments, actual losses may be different from the originally estimated amount recognized. Significant estimates are involved in the determination of provisions related to taxes, environmental liabilities, our workforce reduction initiative and litigation risks. These estimates are subject to change as new information becomes available, primarily with the support of internal specialists or outside consultants, such as actuaries or legal counsel. Adjustments to loss provisions may significantly affect future operating results.

Income tax expense and deferred tax assets

The Group calculates income tax expense in each of the tax jurisdictions in which it operates. This process involves a jurisdiction-by-jurisdiction calculation of the current tax charge and an assessment of temporary differences resulting from the different treatment of certain items for consolidated financial and tax reporting purposes. Temporary differences result in the recognition of deferred tax assets or liabilities in the consolidated financial statements. Deferred tax assets are recognized to the extent that their realization is probable. The realization of deferred tax assets depends, among other things, on the company's ability to generate sufficient taxable income in future years and the reversal of taxable temporary differences, taking into account any restrictions on the carry-forward of tax losses. Various factors are used to assess the probability of the future realization of deferred tax assets, including future reversals of existing taxable temporary differences, past operating results, operational plans, loss carry-forward periods, and tax planning strategies. If actual results differ from these estimates or, if these estimates must be adjusted in future periods, the financial position and results of operations may be affected. In the event of a change in the assessment of future utilization of deferred tax assets, the recognized deferred tax assets must be increased or decreased, as the case may be, and the consequent effects recognized in the separate consolidated income statement, except to the extent that they relate to items directly charged or credited to equity, in which case the related effect is recognized in the relevant equity reserves.

5.2 RESULTS OF OPERATIONS FOR THE THREE YEARS ENDED DECEMBER 31, 2018

5.2.1 Significant Trends Impacting Our Core Businesses

Intense competition continues to have a significant impact on the development of the business. Key trends affecting the core businesses are:

Domestic Business Unit

During 2018, the Italian telecommunications market showed signals of recession, mainly due to the entry of Iliad in the mobile market as the 4th network infrastructured operator.

Due to a simplified offer particularly aggressive in terms of price and volume of data, Iliad has rapidly gained customers and consequently market share to the detriment of the other infrastructured operators, mainly WindTre and Vodafone, while TIM has highlighted a greater resilience also thanks to the contribution of the second-brand virtual operator Kena Mobile, launched in 2017.

The Iliad offer triggered the other operators to reduce prices and increase GB allowance with an impact not only on the mobile sector with the sudden increase of overall MNP exchange and ARPU dilution, but also on the fixed market, generating a price war to recover customer base lost on mobile.

On the other hand, broadband and ultrabroadband development has been confirmed as the main driver of market evolution and provides further growth opportunities for telecommunications operators with respect to the bundling of telecommunications services with Media & Entertainment, IT and Digital services.

In order to address these underlying macro trends, the 2019-2021 Strategic Plan (the "Plan") marks a discontinuity with the past and focuses on execution as a key element for the organic transformation of TIM. The Plan supports a renewed focus real competitive advantages (network quality, scale and client proximity, and technical competences and geographical presence) to promote sustainability. On the technological front, the Plan puts modernization, simplification and artificial intelligence at the core of future investments in order to ensure quality excellence and contain capital expenditure intensity. Quality and reliability at all customer touchpoints (activation, delivery and problem resolution) are as well at the centre of the strategy.

The main objectives over the Plan's horizon are the following:

- delevering the business;
- delivering a sustainable return on capital invested, strengthening cash flow generation through top line stabilization, leaner cost structure and working capital optimization;
- optimizing invested capital through network sharing, key to enhance ROIC;
- revamping Domestic business focusing on quality, TIM's scale and its technical competences; and
- enhancing Brasil riding growth waves and continuing towards postpaid migration.

Brazil Business Unit

In the year 2018 the Gross Domestic Product (GDP) growth expectation of 1.3%, according to the Central Bank Focus Report, when compared to a previous growth projection of 2.8%, at the end of 2017.

Inflation, measured by the Extended National Consumer Price Index (Índice de Preços ao Consumidor Amplo— IPCA), continued under control, at 3.75% below the minimum target set by Central Bank, but with a slight growth when compared to 2017 (2.95%). Unemployment has decreased; however, consumer and business confidence still remain sensitive with the new government's ability to approve relevant reforms to fiscal adjustment. With the inflation below the target, the monetary policies was characterized by the basic interest rate (SELIC) stability at 6.5% per year.

5.2.2 BUSINESS SEGMENTS

The TIM Group reports its financial results on the basis of the following operating segments:

- **Domestic**: includes operations in Italy for voice and data services on fixed and mobile networks for end customers (retail) and other operators (wholesale), the operations of the Telecom Italia Sparkle group (International wholesale), which, at international level (Europe, the Mediterranean and South America), develops fiber optic networks for wholesale customers, the operations of Olivetti (products and services for Information Technology), as well as INWIT S.p.A. (a company operating in the electronic communications infrastructure sector, and in particular the infrastructure for hosting radio transmission equipment for mobile telephone networks, both for TIM and other operators) and the units supporting the Domestic sector;
  - **Brazil**: includes mobile fixed telecommunications operations in Brazil (TIM S.A.);
  - **Other Operations**: includes finance companies and other minor companies not strictly related to the core business of the TIM Group.

In 2018 and 2017, there were no significant changes in the scope of consolidation of the TIM Group.
For a description of certain of these businesses, see "Item 4. Information on the TIM Group—4.2 Business Units".

5.2.3 NON-GAAP FINANCIAL MEASURES

In this Annual Report on Form 20-F, in addition to figures presented in accordance with IFRS as issued by IASB, we disclose figures derived from IFRS that are non-GAAP financial measures ("**Non-GAAP Measures**").

Such financial data is considered Non-GAAP financial measures as defined in Item 10(e) of Regulation S-K under the 1934 Act.

In this Annual Report the Non-GAAP Measure used relates to Net Financial Debt and 2018 Comparable Figures.

Management believes that these non-GAAP financial measures are useful as an additional tool to understand and assess the performance of the Company and should be reviewed in connection with the related GAAP financial measures and the reconciliation of non-GAAP financial measures to their most directly comparable GAAP financial measures set forth below and should be considered only as a supplement to, and not as a substitute for or as a superior measure to, measures of financial performance prepared in accordance with GAAP.

Net Financial Debt is a Non-GAAP financial measure as defined in Item 10(e) of Regulation S-K under the 1934 Act, but is widely used in Italy by financial institutions to assess liquidity and the adequacy of a company's financial structure. We believe that Net Financial Debt provides an accurate indicator of our ability to meet our financial obligations (represented by gross debt) by our available liquidity, represented by the other items shown in the reconciliation table. Net Financial Debt allows us to show investors the trend in our net financial condition over the periods presented. The limitation on the use of Net Financial Debt is that it effectively assumes that gross debt can be reduced by our cash and other liquid assets. In fact, it is unlikely that we would use all of our liquid assets to reduce our gross debt all at once, as such assets must also be available to pay employees, suppliers, and taxes, and to meet other operating needs and capital expenditure requirements. Net Financial Debt and its ratio to equity (including Non-controlling Interest), or leverage, are used to evaluate our financial structure in terms of sufficiency and cost of capital, level of debt, debt rating and funding cost, and whether our financial structure is adequate to achieve our business plan and our financial targets. Our management believes that our financial structure is sufficient to achieve our business plan and financial targets. See "—5.3.2. Capital Resources".

Our management monitors the Net Financial Debt and leverage or similar measures as reported by other telecommunications operators in Italy and outside Italy, and by other major listed companies in Italy, in order to assess our liquidity and financial structure relative to such companies. We also monitor the trends in our Net Financial Debt and leverage in order to optimize the use of internally generated funds versus funds from third parties. Net Financial Debt is reported in our Italian Annual Report to shareholders and is used in presentations to investors and analysts.

Net Financial Debt is calculated as follows:

	As of December 31,				
	2018	2017	2016	2015	2014
	(millions of euros)				
Non-current financial liabilities	25,059	28,108	30,469	30,518	32,325
Current financial liabilities	5,913	4,756	4,056	6,224	4,686
Financial liabilities directly associated with Discontinued operations/Non-current assets held for sale	—	—	—	348	43
Gross financial debt (A)	**30,972**	**32,864**	**34,525**	**37,090**	**37,054**
Non-current financial assets (B)	**(1,594)**	**(1,768)**	**(2,698)**	**(2,989)**	**(2,445)**
Current financial assets:					
Securities other than investments	(1,126)	(993)	(1,519)	(1,488)	(1,300)
Financial receivables and other current financial assets	(340)	(437)	(389)	(352)	(311)
Cash and cash equivalents	(1,917)	(3,575)	(3,964)	(3,559)	(4,812)
Total current financial assets (C)	**(3,383)**	**(5,005)**	**(5,872)**	**(5,399)**	**(6,423)**
Financial assets relating to Discontinued operations/ Non-current assets held for sale (D)	**—**	**—**	**—**	**(227)**	**(165)**
Financial assets (E=B+C+D)	**(4,977)**	**(6,773)**	**(8,570)**	**(8,615)**	**(9,033)**
Net financial debt (A+E)	**25,995**	**26,091**	**25,955**	**28,475**	**28,021**

2018 Comparable Figures are shown in 2018, as the Group applied the accounting policies on a basis consistent with those of the previous years, except for the new standards and interpretations adopted by the Group since January 1, 2018.

To provide a supplemental year-on-year comparison of the financial performance for the year 2018 against 2017, the Group presents "comparable" income statement figures, prepared in accordance with the accounting standards in effect as of immediately prior to January 1, 2018 (including IAS 39, IAS 18, IAS 11, and relative Interpretations).

For further details, please see "Note 2—Accounting Policies" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The impacts of the transition on the main line items of the consolidated statements of financial position are shown below.

	As of December 31, 2017 Historical	IFRS 9 impact(*)	IFRS 15 impact(*)	As of January 1, 2018 Restated
		(millions of euros)		
Assets				
Non-current assets				
Intangible assets				
Intangible assets with a finite useful life	7,192		(110)	7,082
Other non-current assets				
Non-current financial assets	1,768			1,768
Miscellaneous receivables and other non-current assets	2,422		(269)	2,153
Deferred tax assets	993	27		1,020
Current assets				
Trade and miscellaneous receivables and other current assets	4,959	(147)	42	4,854
Current financial assets	5,005			5,005
Total Assets	68,783	(120)	(337)	68,326
Equity and Liabilities				
Equity				
Equity attributable to owners of the Parent	21,557	(100)	17	21,474
Non-controlling interests	2,226	(7)	2	2,221
Total Equity	**23,783**	**(107)**	**19**	**23,695**
Non-current liabilities				
Miscellaneous payables and other non-current liabilities	1,678		(251)	1,427
Deferred tax liabilities	265	(11)	8	262
Current liabilities				
Trade and miscellaneous payables and other current liabilities	7,520		(113)	7,407
Current income tax payables	112	(2)		110
Total Equity and liabilities	**68,783**	**(120)**	**(337)**	**68,326**

(*) For further details, see the specific notes to the Consolidated Financial Statements at December 31, 2018.

Following the adoption of IFRS 9, the different classification of financial assets had no substantial impact for the TIM Group on the measurement of those assets, while the introduction of the expected credit loss model replacing the incurred loss model required by IAS 39, resulted in a reduction of 107 million euros in consolidated equity at the transition date of January 1, 2018.

The comprehensive net impact (including tax effects) of the adoption of IFRS 15 on consolidated equity at January 1, 2018 (transition date) was a positive 19 million euros and mainly connected with the combined effects of:

- the change in the types of contract costs that are deferred;
- the new approach to recognizing activation/installation revenues and the recognition of contract assets connected with the earlier recognition of revenues from bundle offers.

Impact of new accounting standards (IFRS 9 and IFRS 15) on the main line items of the separate consolidated income statements and consolidated statements of financial position for the year 2018

The breakdown of the impact of the new accounting standards on key consolidated income statement figures for year 2018 is shown below.

		Year ended December		
		2018	2018 comparable	New accounting standards impact
		(a)	(b)	(c=a-b)
		(millions of euros)		
Revenues	(1)	18,940	19,109	(169)
Operating expenses	(2)	(11,878)	(11,737)	(141)
Depreciation and amortization	(3)	(4,255)	(4,399)	144
Operating profit (loss)		**561**	**727**	**(166)**
Other income (expenses) from investments	(4)	11	10	1
Finance income (expenses)	(5)	(1,348)	(1,341)	(7)
Profit (loss) before tax from continuing operations		**(777)**	**(605)**	**(172)**
Income tax expense	(6)	(375)	(433)	58
Profit (loss) for the year		**(1,152)**	**(1,038)**	**(114)**
Attributable to:				
Owners of the Parent		**(1,411)**	**(1,298)**	**(113)**
Non-controlling interests		259	260	(1)

1. The change in **Revenues** was attributable to the different accounting of bundle offers and activation/installation revenues and to the discounting of revenues from sales using the deferred payment method, using a discount rate reflecting the creditworthiness of customers.

2. The change in **Operating expenses** was mainly due to the deferral of certain subscriber acquisition costs and contract costs that were previously expensed and to the reclassification of some contract costs from intangible assets to other non-current and current assets (cost deferral), as well as higher provisions for expected losses on trade receivables, resulting from the introduction of an expected credit loss model (replacing the incurred loss model).

3. The change in **Depreciation and amortization** was due to the reclassification of certain contract costs from intangible assets to other non-current and current assets (cost deferral).

4. The change in **Other income (expenses) from investments** was due to the different accounting of the write-downs of the Other investments, which with the new standard are recognized under other components of the statements of comprehensive income.

5. The change in **Finance income (expenses)** was due to higher provisions for expected losses on other financial assets, due to the introduction of an expected credit loss model (replacing the incurred loss model).

6. The change in **Income tax expense** shows the income tax effect of the changes illustrated above.

The impact of the new accounting standards (IFRS 9 and IFRS 15) on the basic Earnings per Ordinary and Savings Share for the year 2018 is equal to -0.01 euros; instead, the impact is zero on diluted Earnings per Ordinary and Savings Share.

The breakdown of the impact of the new accounting standards on the main consolidated statements of financial position figures at December 31, 2018 is shown below.

	As of December 31, 2018	2018 comparable	New accounting standards impact (*)
	(a)	(b)	(c=a-b)
	(millions of euros)		
Assets			
Non-current assets			
Intangible assets	35,658	35,771	(113)
Tangible assets	16,146	16,146	—
Other non-current assets	5,086	5,368	(282)
Non-current assets	**56,890**	**57,285**	**(395)**
Current assets	**8,729**	**8,794**	**(65)**
Total Assets	**65,619**	**66,079**	**(460)**
Equity and Liabilities			
Equity			
Equity attributable to owners of the Parent	19,528	19,716	(188)
Non-controlling interests	2,219	2,225	(6)
Total Equity	**21,747**	**21,941**	**(194)**
Non-current liabilities	30,991	31,276	(285)
Current liabilities	12,881	12,862	19
Total Liabilities	**43,872**	**44,138**	**(266)**
Total Equity and liabilities	**65,619**	**66,079**	**(460)**

(*) For more details, see the information provided on impacts at the transition date.

5.2.4 Overview of 2018 Results of Operations

The following characterized the 2018 results in the Italian (domestic) market in in our Brazil Business Unit:

- **Domestic.** In 2018, the Domestic market was affected by a new competitive and regulatory dynamic (entry of the fourth mobile operator and restoring of the 30-days billing) as well as the stabilization of wireline service revenues, supported by the growth of ultrabroadband customers and revenues from innovative services. This growth was countered by a decrease in revenues in mobile service, a sector impacted to a greater extent by the effects of the new dynamic.
- **Brazil**. In the Brazilian market, 2018 continued to present strong results despite an economic recovery slower than previously expected and amid a more aggressive competitive environment. This resilience of operations was driven by a transformation of the customer base, a strong increase in the value proposition, greater incentive to loyalty offers and more expensive postpaid plans, the construction of the largest and best 4G network in Brazil and an efficiency-oriented approach to all activities.

The following table sets forth our consolidated income statement for the years ended December 31, 2018, 2017 and 2016.

	Year ended December 31,			
	2018	2018 comparable	2017	2016
	(millions of euros)			
Revenues	18,940	19,109	19,828	19,025
Other income	341	341	523	311
Total operating revenues and other income	**19,281**	**19,450**	**20,351**	**19,336**
Acquisition of goods and services	(8,186)	(8,089)	(8,388)	(7,793)
Employee benefits expenses	(3,105)	(3,084)	(3,626)	(3,106)
Other operating expenses	(1,259)	(1,236)	(1,208)	(1,083)
Change in inventories	102	102	35	9
Internally generated assets	570	570	626	639
Depreciation and amortization	(4,255)	(4,399)	(4,473)	(4,291)
Gains (losses) on disposals of non-current assets	(1)	(1)	11	14
Impairment reversals (losses) on non-current assets	(2,586)	(2,586)	(37)	(3)
Operating profit (loss)	**561**	**727**	**3,291**	**3,722**
Share of profits (losses) of associates and joint ventures accounted for using the equity method	(1)	(1)	(1)	(23)
Other income (expenses) from investments	11	10	(18)	7
Finance income	1,056	1,047	1,808	2,543
Finance expenses	(2,404)	(2,388)	(3,303)	(3,450)
Profit (loss) before tax from continuing operations	**(777)**	**(605)**	**1,777**	**2,799**
Income tax expense	(375)	(433)	(490)	(880)
Profit (loss) from continuing operations	**(1,152)**	**(1,038)**	**1,287**	**1,919**
Profit (loss) from Discontinued operations/Non-current assets held for sale	0	0	0	47
Profit (loss) for the year	**(1,152)**	**(1,038)**	**1,287**	**1,966**
Attributable to:				
Owners of the Parent	*(1,411)*	*(1,298)*	*1,121*	*1,808*
Non-controlling interests	*259*	*260*	*166*	*158*

5.2.5 Business Unit Financial Data

The table below sets forth revenues, operating profit (loss), capital expenditures and number of employees by Business Unit, for the periods indicated.

Following the change in the business mission of Persidera, the Media Business Unit was included into the Domestic Business Unit (Core Domestic) as of January 1, 2016.

			Domestic	Brazil	Other Operations	Adjustments and eliminations	Consolidated Total
			(millions of euros, except number of employees)				
	2018		15,031	3,943	—	(34)	18,940
Revenues (1)	2018	(comparable)	15,185	3,959	—	(35)	19,109
	2017		15,354	4,502	—	(28)	19,828
	2016		15,006	4,047	11	(39)	19,025
	2018		16	564	(19)	—	561
Operating profit (loss)	2018	(comparable)	177	569	(19)	—	727
	2017		2,772	535	(16)	—	3,291
	2016		3,376	368	(18)	(4)	3,722
	2018		5,518	890	—	—	6,408
Capital expenditures on an accrual basis	2018	(comparable)	5,634	924	—	—	6,558
	2017		4,551	1,150	—	—	5,701
	2016		3,709	1,167	—	—	4,876
Number of employees at year-end (2)	2018		48,200	9,658	43	—	57,901
	2017		49,851	9,508	70	—	59,429
	2016		51,280	9,849	100	—	61,229

(1) Revenues are total revenues of the various business units of the TIM Group before elimination of intercompany sales (but after elimination of sales between companies within the same major business area).

(2) The number of employees at year-end excludes employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale, and includes personnel with temporary work contracts.

5.2.6 Year Ended December 31, 2018 compared With Year Ended December 31, 2017

❖ **Revenues**

Revenues amounted to 18,940 million euros in 2018, a decrease of 888 million euros, or 4.5%, compared to 2017 (19,828 million euros). The decrease is mainly attributable to the Brazil Business Unit (-559 million euros), due to the depreciation of the Brazilian real of approximately 20% compared to 2017, and the Domestic Business Unit (-323 million euros). The adoption of IFRS 15 had a negative impact of 169 million euro on 2018 revenues (-154 million euro in Domestic Business Unit and -16 million euro in Brazil Business Unit).

Comparable revenues amounted to 19,109 million euros, down by 3.6%, or a decrease of 719 million euros from 19,828 million euros in 2017, removing the impact of the adoption of IFRS 15.

The table below sets forth for the periods indicated gross revenues by Business Unit and consolidated revenues.

	Year ended December 31,						
	2018	2018		2017		Changes	
	Revenues[1]	Revenues comparable[1] (a)	% of Consolidated revenues	Revenues[1] (b)	% of Consolidated revenues	(a-b)	%
	(millions of euros, except percentages)						
Domestic	15,031	15,185	79.5	15,354	77.4	(169)	(1.1)
Core Domestic		*14,161*	*74.1*	14,249	*71.9*	*(88)*	*(0.6)*
International Wholesale		*1,272*	*6.7*	1,349	*6.8*	*(77)*	*(5.7)*
Brazil	3,943	3,959	20.7	4,502	22.7	(543)	(12.1)
Other Operations[2]	—	—	—	—	—	—	
Adjustments and eliminations	(34)	*(35)*	*(0.2)*	*(28)*	*(0.1)*	*(7)*	
Total Revenues	**18,940**	**19,109**	**100.0**	**19,828**	**100.0**	**(719)**	**(3.6)**

(1) Revenues are total revenues of the various business units of the TIM Group before elimination of intercompany sales and after elimination of sales between companies within the same major business area.

(2) The Other Operations of the TIM Group consist of the financial companies and other minor companies not associated with the core business of the TIM Group.

❖ OTHER INCOME

The following table sets forth other income for the years ended December 31, 2018 and 2017:

	Year ended December 31,				
	2018	2018 comparable (a)	2017 (b)	Changes (a-b)	%
	(millions of euros, except percentages)				
Late payment fees charged for telephone services	60	60	59	1	1.7
Recovery of employee benefit expenses, purchases and services rendered	27	27	22	5	22.7
Capital and operating grants	39	39	51	(12)	(23.5)
Damages, penalties and recoveries connected with litigation	29	29	40	(11)	(27.5)
Partnership agreements and other arrangements with suppliers	22	22	129	(107)	(82.9)
Release of liabilities and other arrangements	73	73	188	(115)	(61.2)
Other	91	91	34	57	167.6
Total other income	**341**	**341**	**523**	**(182)**	**(34.8)**

Total other income decreased by 182 million euros, or 34.8% from 523 million euros in 2017 to 341 million euros in 2018.

This decrease resulted from:

- minor contribution fees resulting from partnership agreements and other agreements with suppliers, designed to develop collaboration, in order to strengthen and stabilize industrial, commercial and real estate relations over time;
- 37 million euros recorded in 2018 by the Brazil Business Unit and concerning the positive effect of the tax recovery following the favorable outcome of the tax dispute relative to the unconstitutional grounds of the law that entailed the inclusion of ICMS indirect tax in the base for calculating taxes on PIS and COFINS revenues.

In 2017, the item also included an updated estimate of liabilities connected with customer and supplier accounts for a total of 112 million euros.

❖ Operating Expenses

Operating expenses increased by 1,660 million euros, or 9.7%, from 17,060 million euros in 2017 to 18,720 in 2018. This increase was mainly due to the goodwill impairment loss of 2,590 million euros attributable to the Domestic Business Unit, partially offset by the decrease in Acquisition of goods and services (202 million euros) and Employee benefits expenses (521 million euros).

Comparable operating expenses increased by 1,663 million euros, or 9.7%, from 17,060 million euros in 2017 to 18,723 million euros in 2018.

The components of our operating expenses are as follows:

- **Acquisition of goods and services** decreased by 202 million euros, or 2.4%, from 8,388 million euros in 2017 to 8,186 million euros in 2018. The decrease was principally attributed to the Brazil Business Unit for 322 million euros and was mainly due to a negative exchange rate effect.

  Comparable acquisition of goods and services decreased by 299 million euros, or 3.6%, from 8,388 million euros in 2017 to 8,089 million euros in 2018.

  The following table sets forth the acquisition of goods and services for the years ended December 31, 2018 and 2017:

	Year ended December 31,				
	2018	2018 comparable	2017	Changes	
		(a)	(b)	(a-b)	%
	(millions of euros, except percentages)				
Acquisition of goods	1,957	1,957	1,863	94	5.0
Revenues due to other operators and interconnection costs	1,913	1,913	2,073	(160)	(7.7)
Commercial and advertising costs	1,394	1,306	1,386	(80)	(5.8)
Power, maintenance and outsourced services	1,103	1,101	1,220	(119)	(9.8)
Rent and leases	607	607	645	(38)	(5.9)
Other service expenses	1,212	1,205	1,201	4	0.3
Total acquisition of goods and services	**8,186**	**8,089**	**8,388**	**(299)**	**(3.6)**
% on Revenues	*43.2*	*42.3*	*42.3*		

  For further details, please see "Note 27—Acquisition of goods and services", of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

- **Employee benefits expenses** decreased by 521 million euros, or 14.4%, from 3,626 million euros in 2017 to 3,105 million euros in 2018.

  Comparable employee benefits expenses decreased by 542 million euros, or 14.9%, from 3,626 million euros in 2017 to 3,084 million euros in 2018.

The following table sets forth employee benefits expenses for the years ended December 31, 2018 and 2017:

	Year ended December 31,				
	2018	2018 comparable (a)	2017 (b)	Changes (a-b)	Changes %
	(millions of euros, except percentages)				
Employee benefits expenses—Italian companies:					
Ordinary employee expenses and costs	2,541	2,520	2,551	(31)	(1.2)
Corporate restructuring expenses and other	224	224	697	(473)	n.s.
Total employee benefits expenses—Italy	**2,765**	**2,744**	**3,248**	**(504)**	**(15.5)**
Employee benefits expenses—Outside Italy					
Ordinary employee expenses and costs	331	331	378	(47)	(12.4)
Corporate restructuring expenses and other	9	9	—	9	
Total employee benefits expenses—Outside Italy	**340**	**340**	**378**	**(38)**	**(10.1)**
Employee benefits expenses	**3,105**	**3,084**	**3,626**	**(542)**	**(14.9)**
% on Revenues	*16.4*	*16.1*	*18.3*		

In particular the decrease of Employee benefits expenses relates to:

- the decrease of 473 million euros for restructuring expenses and allocations to employee and other provisions of the Italian component. Specifically, at the end of 2017 a plan was launched for executive and non-executive staff to adopt, among others, Article 4(1–7-ter) of Law 92 of June 28, 2012 (the "Fornero Law", which provides for early retirement arrangements). During 2018, Plan take-up was greater than initially forecast, therefore estimates for staff leaving in 2019-2020 were revised, also taking into account social security changes made by Decree Law n. 2019/4.
- lower ordinary employee expenses for the Italian component, which fell by 10 million euros (-31 million euros on a comparable basis), mainly due to the benefits delivered by the reduction of the average salaried workforce by 1,447 employees (excluding the component relating to the solidarity agreement), which only in part were offset by the termination, at the start of 2018, of the "defensive solidarity" agreements applied by TIM S.p.A. The solidarity agreement was renewed in June 2018 for a further 12 months;
- the decrease of 47 million euros in the component outside Italy of ordinary employee expenses, mainly due to the balance between the impact of the change in exchange rates and local remuneration dynamics of the Brazil Business Unit.

For further details, please see "Note-Employee benefits expenses", of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The Group's average salaried workforce for the periods indicated was as follows:

	Year ended December 31,			
	2018 (a)	2017 (b)	Changes (a-b)	Changes %
	(full time equivalent units, except percentages)			
Average salaried workforce—Italy	45,058	45,648	(590)	(1.3)
Average salaried workforce—Foreign	9,365	9,298	67	0.7
Total average salaried workforce(1)	**54,423**	**54,946**	**(523)**	**(1.0)**

(1) Includes the average employees with temporary work contracts: 0 units in 2018. In 2017, average employees with temporary work contracts were 2 units (1 in Italy and 1 outside Italy).

The Group's employees at December 31, 2018 and 2017 were as follows:

	As of December 31,			
	2018	2017	Changes	
	(a)	(b)	(a-b)	%
	(units, except percentages)			
Employees—Italy	48,005	49,689	(1,684)	(3.4)
Employees—Foreign	9,896	9,740	156	1.6
Total Employees(1)	**57,901**	**59,429**	**(1,528)**	**(2.6)**

(1) No employees with temporary work contracts at December 31, 2018 and at December 31, 2017.

- **Other operating expenses** increased by 51 million euros, or 4.2%, from 1,208 million euros in 2017 to 1,259 million euros in 2018. In particular, Other operating expenses included 108 million euros relative to the Domestic Business Unit, mainly referred to the fine levied on May 8, 2018 in application of the "Golden Power" rule (Italian Decree Law no. 21 of 15/3/2012) and 27 million euros to the Brazil Business Unit for expenses concerning litigation.

Comparable other operating expenses increased by 28 million euros, or 2.3%, from 1,208 million euros in 2017 to 1,259 million euros in 2018.

The following table sets forth other operating expenses for the years ended December 31, 2018 and 2017.

	Year ended December 31,				
	2018	2018 comparable	2017	Changes	
		(a)	(b)	(a-b)	%
		(millions of euros, except percentages)			
Write-downs and expenses in connection with credit management	518	495	400	95	23.8
Provision charges	189	189	228	(39)	(17.1)
TLC operating fees and charges	286	286	356	(70)	(19.7)
Indirect duties and taxes	125	125	111	14	12.6
Penalties, compensation and administrative fines	73	73	33	40	121.2
Association dues and fees, donations, scholarships and traineeships	12	12	15	(3)	(20)
Sundry expenses	56	56	65	(9)	(13.8)
Total other operating expenses	**1,259**	**1,236**	**1,208**	**28**	**2.3**
% on Revenues	*6.6*	*6.5*	*6.1*		

- **Depreciation and Amortization** decreased by 218 million euros, or 4.9%, from 4,473 million euros in 2017 to 4,255 million euros in 2018.

  Comparable depreciation and amortization decreased by 74 million euros, or 1.7%, from 4,473 million euros in 2017 to 4,399 million euros in 2018.

  The following table sets forth depreciation and amortization for the years ended December 31, 2018 and 2017.

	Year ended December 31,				
	2018	2018 comparable	2017	Changes	
		(a)	(b)	(a-b)	%
		(millions of euros, except percentages)			
Amortization of intangible assets with a finite useful life	1,599	1,743	1,793	(50)	(2.8)
Depreciation of tangible assets—owned and leased	2,656	2,656	2,680	(24)	(0.9)
Total depreciation and amortization	**4,255**	**4,399**	**4,473**	**(74)**	**(1.7)**
% on Revenues	*22.5*	*23.2*	*22.6*		

Further details are provided in the Note—"Tangible assets (owned and under finance leases)" and Note—"Intangible assets with a finite useful life" of the Notes to the Consolidated Financial Statements, included elsewhere herein.

- Gains (losses) on disposals of non-current assets

  In 2018, this item was a negative of 1 million euros. In 2017, this item was a positive 11 milllion euros.

- Net impairment losses on non-current assets

  This item amounted to 2,586 million euros in 2018 and mainly refers to the goodwill impairment loss of 2,590 million euros attributable to the Domestic Business Unit.

  In accordance with IAS 36, goodwill is not subject to amortization, but is tested for impairment on at least an annual basis, when preparing the company's consolidated financial statements. At September 30, 2018, with reference to the Core Domestic Cash-Generating Unit, internal and external events and circumstances had arisen that led the company to carry out impairment testing on the CGU, with a recognition of an Impairment loss relative to the Core Domestic Unit for an amount of 2,000 million euros.

  In the 2018 Financial Statements, the annual impairment test resulted in an additional impairment loss of 450 million euros on the goodwill attributed to the Core Domestic Cash-Generating Unit, therefore the total impairment loss for the financial year 2018 amounted to 2,450 million euros, as well as an impairment loss of 140 million euros on the goodwill attributed to the International Wholesale Cash-Generating Unit.

  An increase or decrease in the discount rate used in the discounted cash flow for Core Domestic CGU of 0.1%, would result in a change (decrease or increase) of the recoverable amount of approximately 700 million euros. Management has determined that there are no reasonable possible changes to other key assumptions (i.e. growth rate and Capex/Revenues ratio) that could cause an additional material impairment.

  With reference to the Brazil Cash Generating Units, the Impairment test exercise did not show any impairment losses to the Goodwill allocated to the said CGUs.

  In 2017, net impairment losses on non-current assets amounted to 37 million euros and mainly consisted of write-downs of intangible assets.

  For further details please see "Note-Goodwill" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

❖ **OPERATING PROFIT (LOSS)**

In 2018, **Operating profit** was 561 million euros, compared to 3,291 million euros in 2017, a decrease of 2,730 million euros (-82.9%) compared to 2017. The Operating profit margin was 3.0% (16.6% in 2017).

Comparable Operating profit for 2018 totaled 727 million euros (3,291 million euros for 2017), a decrease of 2,564 million euros (-77.9%) compared to 2017. The Operating profit margin was 3.8% (16.6% in 2017).

In 2018 and 2017, the TIM Group recognized certain net operating expenses connected to events and transactions that by their nature do not occur on an ongoing basis in the normal course of operations and which have been shown because their amount is significant. Such expenses include the goodwill impairment loss, corporate restructuring and reorganization expenses, resulting from regulatory disputes and sanctions and the liabilities related to those expenses, for disputes with former employees, and liabilities with customers and/or suppliers, as well as items related to adjustments relative to previous years.

In detail:

	Year ended December 31,	
	2018	2017
	(millions of euros)	
Revenues:		
Revenue adjustments of previous years	62	
Other income:		
Brazil Business Unit Tax recovery effect	(37)	
Acquisition of goods and services and Change in inventories		
Professional expenses, consulting services and other costs	15	10
Employee benefits expenses		
Expenses related to restructuring, rationalization and other	233	697
Sundry expenses and provisions		
Goodwill impairment loss on Core Domestic and International Wholesale	2,590	
Expenses related to disputes and regulatory penalties and liabilities related to those expenses, and expenses related to disputes with former employees and liabilities with customers and/or suppliers	135	176
Impairment losses on intangible assets	—	30
Impact on Operating profit	2,998	913

Net expenses in 2018 included:

- the goodwill impairment loss attributed to the Core Domestic unit and International Wholesale (2,590 million euros);
- expenses related to company restructuring processes (233 million euros);
- sundry expenses for 135 million euros including provisions to cover a fine of 74.3 million euros levied for alleged infringement of Article 2 of Italian Decree Law 21 of March 15, 2012 (the "Golden Power" rule) under a ruling of May 8, 2018. TIM lodged an appeal with the Lazio Regional Administrative Court (TAR), requesting the precautionary suspension of the decision. In July 2018, the TAR granted the application and suspended payment of the fine, setting a date for the appeal to be heard;
- the adjustment of some contractual liabilities in order to align them with their estimated period end value. Specifically, liabilities relative to "prepaid" contracts were adjusted by a total of 62 million euros, wholly attributable to previous financial years;
- the positive effect of the Brazil Business Unit tax recovery, equal to 37 million euros, following the favorable outcome of the tax dispute relative to the unconstitutional grounds of the law that entailed the inclusion of ICMS indirect tax in the base for calculating taxes on PIS and COFINS revenues.

Expenses in 2017 mainly included provisions for the start-up of the company restructuring plan of TIM S.p.A.

❖ Share Of Profits (Losses) Of Associates And Joint Ventures Accounted For Using The Equity Method

Shares of losses of associates and joint ventures accounted for using the equity method amounted to 1 million euros in 2018 and in 2017.

❖ Income (Expenses) From Investments

In 2018, this item amounted to an income of 11 million euros and mainly included the dividends paid to TIM S.p.A. by the Emittenti Titoli company.

In 2017, this item amounted to an expense of 18 million euros and essentially included the allocation to the income statement of the Reserve for exchange differences on translating foreign operations for the investee company Tierra Argentea S.A., the liquidation of which was completed that year.

❖ **FINANCE INCOME (EXPENSES), NET**

Finance income (expenses) show a net expense of 1,348 million euros (expense of 1,495 million euros in 2017). The improvement was mainly due to lower finance expenses, connected to the reduction in the Group's average debt exposure and a positive effect in interest rates from the refinancing operations carried out over the last 12 to 18 months.

For further details about finance income and finance expenses, please see "Note—Finance income and Finance expenses" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

❖ **INCOME TAX EXPENSE**

This item amounted to 375 million euros, a decrease of 115 million euros as compared to 2017 (490 million euros). In particular, 2018 benefited from approximately 200 million euros contributed by the Brazil Business Unit, from the recognition of deferred tax assets related to the tax recoverability of past losses recorded in previous years that had become recoverable based on the expected profits. This impact was offset by the Parent TIM S.p.A.'s higher taxes, in relation to the impact of certain items in the 2018 fiscal year which have no tax relevance (mainly driven by goodwill impairment loss and other non-deductible sundry expenses and minor benefits).

5.2.7 RESULTS OF OPERATIONS OF BUSINESS UNITS FOR THE YEAR ENDED DECEMBER 31, 2018 COMPARED WITH THE YEAR ENDED DECEMBER 31, 2017

❖ **DOMESTIC**

The following table sets forth, certain financial and other data for the Domestic Business Unit for the years ended December 31, 2018 and 2017.

	Year ended December 31,				
	2018	2018 comparable (a)	2017 (b)	Changes (a-b)	Changes %
	(millions of euros, except percentages and employees)				
Revenues	15,031	15,185	15,354	(169)	(1.1)
Operating profit (loss)	16	177	2,772	(2,595)	(93.6)
% of Revenues	*0.1*	*1.2*	*18.1*		
Employees at year-end (units)	48,200		49,851	(1,651)	(3.3)

Revenues

Revenues amounted to 15,031 million euros in 2018 and decreased by 323 million euros, or 2.1%, compared to 2017 (15,354 million euros). The adoption of IFRS 15 had a negative impact of 154 million euro on 2018 revenues.

Comparable revenues decreased by 169 million euros, or 1.1%, from 15,354 million euros in 2017 to 15,185 million euros in 2018.

The **revenues from services** amounted to 13,650 million euros (-350 million euros compared to 2017, or -2.5%), impacted by the effects of a changed regulatory and competitive scenario (30-day pricing restored, entry of a fourth mobile operator and a reduction in the prices of some wholesale services). In detail:

- **revenues from services for the fixed-line market** amounted to 9,875 million euros, a decrease of 77 million euros, or 0.8%, compared to 2017, notwithstanding stronger market competition.

Comparable revenues from services for the fixed-line market remaining stable with respect to 2017 (9,951 million euros in 2018).

Such stabilization was due to higher retail ARPU, higher revenues from ICT solutions (+99 million euros compared to 2017, or 14.8%) and from innovative services for data connectivity (+306 million euros, or 14.4%), also due to the growth in Ultrabroadband customers (+1.0 million compared to 2017) that at the end of 2018 reached 3.2 million (5.4 million including wholesale lines). These dynamics offset the natural decline in revenues from traditional voice services (-334 million euros), due to the decrease in traditional accesses and lower regulated prices on some wholesale services (-65 million euros);

- **revenues from services for the Mobile market** amounted to 4,405 million euros (a decrease of 250 million euros compared to 2017 or 5.4%).

  Comparable revenues from services for the mobile market amounted to 4,513 million euros (a decrease of 142 million euros compared to 2017, or 3.1%).

  Revenues from services for the mobile market were affected to a greater extent by the changed regulatory and competitive scenario, with a decrease in calling and broadband ARPU.

Revenues from product sales, including the change in work in progress, amounted to 1,381 million euros in 2018 (an increase of 27 million euros compared to 2017).

Comparable revenues from product sales amounted to 1,351 million euros (a decrease of 3 million euros compared to 2017).

Other income

In 2018, other income decreased by 198 million euros, from 471 million euros in 2017 to 273 million euros in 2018. This item includes contribution fees resulting from partnership agreements, insurance indemnities and adjustments to estimated liabilities connected with customers and supplier accounts.

	2018	2017	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Late payment fees charged for telephone services	49	48	1	2.1
Recovery of employee benefit expenses, purchases and services rendered	27	22	5	22.7
Capital and operating grants	33	44	(11)	(25.0)
Damages, penalties and recoveries connected with litigation	28	39	(11)	(28.2)
Partnership agreements and other arrangements with suppliers	22	97	(75)	(77.3)
Release of liabilities and other arrangements	75	192	(117)	(60.9)
Other	39	29	10	34.5
Total other income	**273**	**471**	**(198)**	

Operating profit

Operating profit for the Domestic Business Unit in 2018 amounted to 16 million euros (2,772 million euros in 2017), a decrease of 2,756 million euros, with the Operating profit margin at 0.1% (18.1% in 2017).

Comparable Operating profit in 2018 amounted to 177 million euros (2,772 million euros in 2017), a decrease of 2,595 million euros, with the Operating profit margin at 1.2% (18.1% in 2017).

Operating profit in 2018 reflected the negative impact of non-recurring net expenses, including the aforesaid impairment loss on goodwill of the Core Domestic unit and International Wholesale totaling 2,998 million euros.

Operating profit was also impacted by the change in the following line items included under operating expenses and shown in the table below.

	Year ended December 31,			
	2018	2017	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Acquisition of goods and services	6,360	6,235	125	2.0
Employee benefits expenses	2,781	3,266	(485)	(14.8)
Other operating expenses	763	704	59	8.4

In detail:

- **acquisition of goods and services** increased by 125 million euros compared to 2017. Costs for the acquisition of goods increased mainly due to higher purchasing volumes of equipment and handsets linked to the increase in product sales and to higher commercial and advertising costs, offset by a reduction in costs for energy and outsourced services, as a result of streamlining actions taken during the year.
- **employee benefits expenses** decreased by 485 million euros, due to the same factors that impacted italian employee benefits expenses at the Group level;
- **other operating expenses** increased by 59 million euros, compared to 2017. Other operating expenses include 108 million euros (176 million euros in the 2017), mainly referring to the fine imposed on May 8, 2018 in the application of Decree Law 15/3/2012 n. 21 ("Golden Power"), this item also includes higher provision charges for bad debts compared to 2017 mainly attributable to difficulties and delays in the receipts of some South American and Mediterranean Basin operators.

Employees

The number of employees in the Domestic Business Unit was 48,200 as of December 31, 2018, a reduction of 1,651 employees compared to December 31, 2017.

* * *

The principal operating and financial data of the Domestic Business Unit are reported according to the two cash-generating units ("**CGU**"): Core Domestic and International Wholesale—Telecom Italia Sparkle group.

Revenues and operating profit in 2018 and in 2017 were as follows:

Core Domestic

	Year ended December 31,			
	2018	2017	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Revenues	14,008	14,249	(241)	(1.7)
Operating profit	173	2,736	(2,563)	(93.7)

Revenues for the Core Domestic Cash-Generating Unit amounted to 14,008 million euros in 2018 and decreased by 241 million euros compared to 2017 (14,249 million euros). Such decrease is mainly related to due to the changed competitive and regulatory scenario (entry of a fourth mobile operator, 30-day pricing restored).

International Wholesale

	Year ended December 31,			
	2018	2017	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Revenues	1,272	1,349	(77)	(5.7)
Operating profit	(144)	37	(181)	

Revenues for the International Wholesale Cash-Generating Unit amounted to 1,272 million euros in 2018 and decreased by 77 million euros compared to 2017 (1,349 million euros). Such decrease is mainly related to the downturn in revenues from traditional telephone services and to the expiry of long-term contracts relative to the Mediterranean Basin area (IP/Data services).

❖ BRAZIL

The following table sets forth certain financial and other data for the Brazil Business Unit for the years ended December 31, 2018 and 2017.

	Year ended December 31,							
	2018	2018 comparable	2017	2018	2018 comparable	2017	Changes	
		(a)	(b)		(c)	(d)	(c-d)	(c-d)/d%
	(millions of euros, except percentages and employees)			(millions of Brazilian reais, except percentages and employees)				
Revenues	3,943	3,959	4,502	16,981	17,050	16,234	816	5.0
Operating profit	564	569	535	2,428	2,449	1,931	518	26.8
% of Revenues	*14.3*	*14.4*	*11.9*	*14.3*	*14.4*	*11.9*		
Employees at year-end (units)		9,658	9,508		9,658	9,508	150	1.6

Revenues

Revenues for 2018 amounted to 16,981 million reais, an increase of 747 million reais (+4.6% compared to 2017).

Comparable revenues for 2018, amounted to 17,050 million reais, an increase of 816 million reais (+5.0% compared to 2017).

Total lines in place at December 31, 2018 amounted to 55.9 million, a decline of 2.7 million compared to December 31, 2017 (58.6 million). The lower figure was driven entirely by the prepaid segment (-5.1 million), only partially offset by growth in the post-paid segment (+2.4 million), in part due to the consolidation underway in the market for second SIM cards. Postpaid customers accounted for 36.2% of the customer base at December 31, 2018, an increase of 5.8 percentage points on December 2017 (30.4%).

Operating profit

Operating profit amounted to 2,428 million reais in 2018, an increase of 497 million reais (+25.7%) compared to 2017 (1,931 million reais). Growth in Operating profit was attributable to both the positive performance of revenues and the benefits delivered by projects to enhance the efficiency of the operating expenses structure.

Comparable operating profit in 2018 amounted to 2,449 million reais, an increase of 518 million reais (+26.8%) compared to 2017 (1,931 million reais).

With regard to changes in operating costs, the following table sets forth certain expenses for the years ended December 31, 2018 and 2017.

	Year ended December 31,					
	2018	2017	2018	2017	Changes	
			(a)	(b)	(a-b)	%
	(millions of euros)		(millions of Brazilian reais, except percentages)			
Acquisition of goods and services	1,846	2,168	7,949	7,816	133	1.7
Employee benefits expenses	317	353	1,364	1,274	90	7.1
Other operating expenses	491	500	2,114	1,805	309	17.1
Change in inventories	(14)	6	(59)	20	(79)	—

- **acquisition of goods and services** increased by 133 million reais, or 1.7%, from 7,816 million reais in 2017 to 7,949 million reais in 2018;
- **employee benefits expenses**, increased by 90 million reais, or 7.1%, from 1,274 million reais in 2017 to 1,364 million reais in 2018. The increase was mainly due to the inflation of the previous year, which updated the wage and benefits base, as well as higher number of employees (+1.6%);
- **other operating expenses** increased by 309 million reais, or 17.1%, from 1,805 million reais in 2017 to 2,114 million reais in 2018;

Employees

Employees in the Brazil Business Unit were 9,658 units at December 31, 2018, an increase of 150 units compared to December 31, 2017 (9,508 units).

5.2.8 YEAR ENDED DECEMBER 31, 2017 COMPARED WITH YEAR ENDED DECEMBER 31, 2016

❖ **REVENUES**

Revenues increased by 803 million euros, or 4.2%, from 19,025 million euros in 2016 to 19,828 million euros in 2017. This increase was mainly attributable to an increase of 455 million euros in the Brazil Business Unit, which included a positive exchange rate effect of 284 million euros. Revenues for the Domestic Business Unit increased by 348 million euros.

The table below sets forth for the periods indicated gross revenues by Business Unit and consolidated revenues.

	Year ended December 31,					
	2017		2016		Changes	
	Revenues(1)	% of Consolidated revenues	Revenues(1)	% of Consolidated revenues	(a-b)	%
	(a)		(b)			
	(millions of euros, except percentages)					
Domestic	15,354	*77.4*	15,006	78.9	348	2.3
Core Domestic	14,249	*71.9*	13,926	73.2	323	2.3
International Wholesale	*1,349*	*6.8*	*1,351*	*7.1*	*(2)*	*(0.1)*
Brazil	4,502	22.7	4,047	21.3	455	11.2
Other Operations(2)	0	0.0	11	0.1	(11)	(100.0)
Adjustments and eliminations	*(28)*	*(0.1)*	*(39)*	*(0.3)*	*11*	*(28.2)*
Total Revenues	**19,828**	**100.0**	**19,025**	**100.0**	**803**	**4.2**

(1) Revenues are total revenues of the various business units of the TIM Group before elimination of intercompany sales and after elimination of sales between companies within the same major business area.

(2) The Other Operations of the TIM Group consist of the financial companies and other minor companies not associated with the core business of the TIM Group.

❖ Other Income

The following table sets forth other income for the years ended December 31, 2017 and 2016:

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Late payment fees charged for telephone services	59	60	(1)	(1.7)
Recovery of employee benefit expenses, purchases and services rendered	22	33	(11)	(33.3)
Capital and operating grants	51	36	15	41.7
Damages, penalties and recoveries connected with litigation	40	24	16	66.7
Partnership agreements and other arrangements with suppliers	129	71	58	81.7
Release of liabilities and other arrangements	188	—	188	
Other income	34	87	(53)	
Total other income	**523**	**311**	**212**	**68.2**

Total other Income increased by 212 million, or 68.2% from 311 million euros in 2016 to 523 million euros in 2017. This increase resulted from the impact of contribution fees derived from partnership agreements signed with leading technology suppliers. These agreements are aimed at developing the collaboration between the parties, in order to strengthen and stabilize the business and industrial relationship over time, to actively contribute to TIM's marketing plan for the development and use of several strategic services in Italy and in Brazil. The item also included insurance indemnities and updated estimates of liabilities connected with customer and supplier accounts.

❖ Operating Expenses

Operating expenses increased by 1,446 million euros, or 11.2%, from 15,614 million euros in 2016 to 17,060 million euros in 2017.

The components of our operating expenses are as follows:

- **Acquisition of goods and services** amounted to 8,388 million euros in 2017, an increase of 595 million euros compared to 2016 (7,793 million euros).

The following table sets forth the acquisition of goods and services for the years ended December 31, 2017 and 2016:

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Purchase of goods	1,863	1,614	249	15.4
Portion of revenues to be paid to other operators and interconnection costs	2,073	2,012	61	3.0
Commercial and advertising costs	1,386	1,231	155	12.6
Power, maintenance and outsourced services	1,220	1,218	2	0.2
Rent and leases	645	616	29	4.7
Other service expenses	1,201	1,102	99	9.0
Total acquisition of goods and services	**8,388**	**7,793**	**595**	**7.6**
% on Revenues	*42.3*	*41.0*		

The increase in Acquisition of goods and services was driven by the Domestic Business Unit, for a total of 450 million euros, primarily by the acquisition of products for resale. The Brazil Business Unit reported an increase of 140 million euros, attributable entirely to the exchange rate effect, without which the item would have shown a drop of around 3 million euros.

For further details, please see "Note-Acquisition of goods and services", of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

- **Employee benefits expenses**

The following table sets forth employee benefits expenses for the years ended December 31, 2017 and 2016:

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Employee benefits expenses—Italian companies:				
Ordinary employee expenses and costs	2,551	2,600	(49)	(1.9)
Corporate restructuring expenses	697	144	553	n.s.
Total employee benefits expenses—Italy	**3,248**	**2,744**	**504**	**18.4**
Employee benefits expenses—Outside Italy				
Ordinary employee expenses and costs	378	347	31	8.9
Corporate restructuring expenses	—	15	(15)	
Total employee benefits expenses—Outside Italy	**378**	**362**	16.0	4.4
Total employee benefits expenses	**3,626**	**3,106**	**520**	**16.7**
% on Revenues	*18.3*	*16.3*		

Employee benefits expenses increased by 520 million euros, or 16.37% from 3,106 million euros in 2016 to 3,626 million euros in 2017. This increase resulted from:

- a decrease of 49 million euros in the Italian component of ordinary employee expenses, partly as a result of the reduction in the average salaried workforce by 1,517 employees. By contrast, in 2016, following the non-fulfillment of the conditions for the payment of the Results Bonus to employees, related accruals made in the 2015 financial statements were reversed;
- the recognition of a total of 697 million euros relating to provisions to Employee benefits and sundry expenses, of which 674 million euros were related to the commencement of the new company restructuring plan for TIM S.p.A. which will unfold over the course of the 2018 – 2020 Strategic Plan and is designed to support the digitization process by drawing on all measures provided by law. Specifically, the plan will involve, *inter alia,* the application of Article 4 (1–7-ter) of the "Fornero Law" (Law 92 of June 28, 2012) for executive and non-executive personnel, which provides for early retirement arrangements, as well as the use of other measures contributing to the economic sustainability of the Plan. In 2016, a total of 144 million euros in provisions for expenses were allocated for the application of Article 4 of the "Fornero Law" and the management restructuring plan;
- an increase of 16 million euros in employee benefits expenses in the component outside Italy; the lower cost of labor connected with the drop in the average salaried workforce outside Italy by 1,392 average employees was offset by both local wage growth and the exchange rate effect primarily from the Brazil Business Unit, which had higher cost of approximately 24 million euros. In the previous year, the Brazil Business Unit had recognized a total of 16 million euros (at constant exchange rates) in expenses relating to the implementation of the company restructuring plan.

For further details, please see "Note-Employee benefits expenses", of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The Group's average salaried workforce for the periods indicated was as follows:

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(full time equivalent units, except percentages)			
Average salaried workforce—Italy	45,648	47,166	(1,518)	(3.2)
Average salaried workforce—Foreign	9,298	10,689	(1,391)	(13.0)
Total average salaried workforce(1)	**54,946**	**57,855**	**(2,909)**	**(5.0)**
Non-current assets held for sale (Sofora-Telecom Argentina group)		2,581	(2,581)	(100.0)
Total Average salaried workforce—including Non-current assets held for sale(1)	**54,946**	**60,436**	**(5,490)**	**(9.1)**

(1) Includes the average employees with temporary work contracts: 2 units in 2017 (1 in Italy and 1 outside Italy). In 2016 average employees with temporary work contracts were 4 units (2 in Italy and 2 outside Italy).

The Group's employees at December 31, 2017 and 2016 were as follows:

	As of December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(units, except percentages)			
Employees—Italy	49,689	51,125	(1,436)	(2.8)
Employees—Foreign	9,740	10,104	(364)	(3.6)
Total Employees(1)	**59,429**	**61,229**	**(1,800)**	**(2.9)**
Total Employees—including Non-current assets held for sale(1)	**59,429**	**61,229**	**(1,800)**	**(2.9)**

(1) Includes employees with temporary work contracts: nil units at December 31, 2017 and 4 units at December 31, 2016.

- **Other operating expenses**

The following table sets forth other operating expenses for the years ended December 31, 2017 and 2016.

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Write-downs and expenses in connection with credit management	400	335	65	19.4
Provision charges	228	144	84	58.3
Indirect duties and taxes	111	100	11	11.0
TLC operating fees	356	373	(17)	(4.6)
Penalties, compensation and administrative sanctions	33	44	(11)	(25.0)
Association dues and fees, donations, scholarships and traineeships	15	18	(3)	(16.7)
Sundry expenses	65	69	(4)	(5.8)
Total other operating expenses	**1,208**	**1,083**	**125**	**11.5**
% on Revenues	*6.1*	*5.7*		

Other operating expenses increased by 125 million euros, or 11.5%, from 1,083 million euros in 2016 to 1,208 million euros in 2017. In 2017, the Domestic Business Unit recorded 176 million euros in expenses related to disputes and regulatory penalties and liabilities and expenses related to disputes with former employees and liabilities with customers and/or suppliers. The Brazil Business Unit recorded a decrease of

4 million euros, despite an exchange rate effect of 35 million euros due to lower provisions for risks and lower operating expenses for telecommunications activities. The decrease was driven by lower provision charges and lower contribution fees for telecommunications operations.

- **Depreciation and Amortization**

The following table sets forth depreciation and amortization for the years ended December 31, 2017 and 2016.

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Amortization of intangible assets with a finite useful life	1,793	1,743	50	2.9
Depreciation of tangible assets—owned and leased	2,680	2,548	132	5.2
Total depreciation and amortization	**4,473**	**4,291**	**182**	**4.2**
% on Revenues	*22.6*	*22.6*		

Details are provided in the Note—"Tangible assets (owned and under finance leases)" and Note—"Intangible assets with a finite useful life" of the Notes to the Consolidated Financial Statements, included elsewhere herein.

- **Gains (losses) on disposals of non-current assets**

Gains on disposals of non-current assets decreased by 3 million euros, or 21.4%, from 14 million euros in 2016 to 11 million euros in 2017. The decrease was related to fluctuations in the ordinary asset renewal process.

In 2016, this item was a positive of 14 million euros and included the gain of 44 million reais (approximately 12 million euros at the 2016 average exchange rate) realized by the Brazil Business Unit from the sale of two further tranches of telecommunications towers to American Tower do Brasil.

- **Net impairment losses on non-current assets**

Net impairment losses on non-current assets increased by 34 million euros, from 3 million euros in 2016 to 37 million euros in 2017 and, related primarily to impairment losses on intangible assets.

In preparing the Annual Report for 2017, the TIM Group carried out an impairment test on the goodwill. The results of that testing, carried out in accordance with the specific procedures adopted by the Group, confirmed the amounts of Goodwill allocated to the Group's individual Cash Generating Units.

For further details please see "Note-Goodwill" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

❖ **OPERATING PROFIT (LOSS)**

Operating profit decreased by 431 million euros, or 11.6%, from 3,722 million euros in 2016 to 3,291 million euros in 2017. The operating profit margin declined by 3.0 percentage points from 19.6% in 2016 to 16.6% in 2017, as a result of the difference between revenues and other (operating) income and operating expenses described above.

In particular, in 2017 and 2016, the TIM Group recognized certain operating expense and income items that are material in terms of amount and that, by their nature, do not occur continuously in the normal course of operations. They include expenses resulting from corporate restructuring and reorganization processes, expenses resulting from regulatory disputes and penalties and the liabilities related to those expenses, expenses for disputes with former employees, and liabilities with customers and/or suppliers.

In detail:

	Year ended December 31,	
	2017	2016
	(millions of euros)	
Acquisition of goods and services and Change in inventories		
Expenses related to agreements and the development of non-recurring projects	**10**	**2**
Employee benefits expenses(*)		
Expenses related to restructuring and rationalization and other expenses	**697**	**160**
Sundry expenses and provisions		
Expenses related to disputes and regulatory penalties and liabilities related to those expenses, and expenses related to disputes with former employees and liabilities with customers and/or suppliers	**176**	**36**
(Gain)/loss from Brazil Towers disposal(*)	**—**	**(13)**
Impairment losses on intangible assets	**30**	**—**
Impact on Operating profit	**913**	**185**

(*) The 2016 value of the Brazil Business Unit is stated at constant exchange rates (average 2017 exchange rate). The component of the cost of labor at historical exchange rates amounted to 14 million euros, while the gain realized on the disposal of telecommunication towers amounted to 12 million euros.

Expenses in 2017 mainly included provisions connected with the commencement of the new company restructuring plan for TIM S.p.A., which will unfold over the course of the 2018–2020 Industrial Plan and is designed to support the digitization process by drawing on all measures provided by law. Specifically, the plan will involve, *inter alia*, the application of article 4(1–7) of Law 92 of June 28, 2012 (the "Fornero Law") for executive and non-executive personnel, which provides for early retirement arrangements, as well as the use of measures for economic sustainability.

❖ Share Of Profits (Losses) Of Associates And Joint Ventures Accounted For Using The Equity Method

Shares of losses of associates and joint ventures accounted for using the equity method improved by 22 million euros, from a 23 million euro loss in 2016 to a 1 million euro loss in 2017, primarily as a result of the write-down of the investment held in Alfiere S.p.A.

❖ Other Income (Expenses) From Investments

Income (expenses) from investments changed by 25 million euros, from a 7 million euro income in 2016 to an expense of 18 million euros in 2017, as a result of the allocation of the reserve for exchange differences on translating foreign operations for the investee company Tierra Argentea S.A. to the income statement, the liquidation of which has now been completed.

The 7 million euros income in 2017 was primarily due to dividends distributed by Emittenti Titoli to TIM S.p.A.

❖ Finance Income (Expenses), Net

Net finance expenses increased by 588 million euros, from 907 million euros in 2016 to 1,495 million euros in 2017. The balance recorded in 2017 was affected by the absence of the positive impact of 565 million euros relating to the fair value measurement through profit and loss, performed separately to its liability component, of the embedded option included in the mandatory convertible bond issued by Telecom Italia Finance S.A. at the end of 2013, for 1.3 billion euros and converted in November 2016 ("Guaranteed Subordinated Mandatory Convertible Bonds due 2016 convertible into ordinary shares of TIM S.p.A.").

For further details about finance income and finance expenses, please see "Note—Finance income and Finance expenses", of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

❖ **INCOME TAX EXPENSE**

Income tax expense declined by 390 million euros, from 880 million euros in 2016 to 490 million euros in 2017, mainly as a result of a lower taxable base of the Parent TIM S.p.A., which benefited from tax exemptions and facilities under laws in force.

5.2.9 RESULTS OF OPERATIONS OF BUSINESS UNITS FOR THE YEAR ENDED DECEMBER 31, 2017 COMPARED WITH THE YEAR ENDED DECEMBER 31, 2016

❖ **DOMESTIC**

The following table sets forth, certain financial and other data for the Domestic Business Unit for the years ended December 31, 2017 and 2016.

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages and employees)			
Revenues	15,354	15,006	348	2.3
Operating profit (loss)	2,772	3,376	(604)	(17.9)
% of Revenues	*18.1*	*22.5*		
Employees at year-end (units)	49,851	51,280	(1,429)	(2.8)

Revenues

Revenues increased by 348 million euros, or 2.3%, from 15,006 million euros in 2016 to 15,354 million euros in 2017, confirming the recovery begun in the previous year.

Revenues from services increased by 122 million euros, or 0.9%, from 13,878 million euros in 2016 to 14,000 million euros in 2017, showing stronger growth relative to total revenues. Revenues from services recorded grew by 2.1% year-on-year in the fourth quarter, posting the strongest performance in over ten years, driven by growth in the customer base of the Mobile and Fixed Broadband segments and the resilience of ARPU levels, buoyed by growth in the penetration of ultrabroadband connectivity services (Fiber and LTE) and digital and ICT services.

In detail:

- **Fixed-line service revenues** remained largely stable compared to 2016 at 9,952 million euros (-0.1%), however, there was improvement in the fourth quarter of 2017, where fixed-line service revenues grew by 1.2% year-on-year. Revenues from traditional voice services declined by 279 million euros relative to 2016 as a result of declining traditional accesses and a reduction in regulated prices for certain wholesale services of 72 million euros. On the other hand, revenues from ICT solutions grew by 56 million euros, or 9% and revenues from innovative data connectivity services grew by 284 million euros, or 15%, driven by a 1.2 million customer growth in the ultrabroadband customer base, which reached a total of 2.1 million customers and 3.1 million including wholesale lines.
- **Mobile services revenues** increased by 75 million euros, or 1.6%, from 4,580 million euros in 2016 to 4,655 million euros in 2017. Growth was driven by the positive competitive performance, which led to growth in the customer base without diluting ARPU levels. The growth observed in the first three quarters was confirmed in the fourth quarter with a 0.5% increase relative to the fourth quarter of 2016, despite the impact of new roaming rules in the European Union.

Revenues from product sales, including the change in work in progress, increased by 226 million euros, or 20%, from 1,128 million euros in 2016 to 1,354 million euros in 2017 and reflected an increase in sales of smartphones and connected devices, including smart TVs, Smart Home products, modems, set-top boxes, etc.

The following table sets forth the Domestic Business Unit's revenues by market segment for the years ended December 31, 2017 and 2016.

- **Core Domestic**

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages and employees)			
Revenues	14,249	13,926	323	2.3
Consumer	*7,737*	*7,389*	*348*	*4.7*
Business	4,656	*4,531*	*125*	*2.8*
Wholesale	1,690	*1,780*	*(90)*	*(5.1)*
Other	166	*226*	*(60)*	*(26.5)*
Operating profit (loss)	2,736	3,309	(573)	*(17.3)*
% of Revenues	*19.2*	*23.8*		
Employees at year-end (units)(*)	49,095	50,527	(1,432)	(2.8)

(*) Includes employees with temporary work contracts: nil unit in 2017, 1 units in 2016.

In detail:

- **Consumer**: revenues for the Consumer segment increased by 348 million euros, or 4.7%, from 7,389 million euros in 2016 to 7,737 million euros in 2017. This performance continued the trend of recovery that began in 2016.

  Revenues from services increased by 153 million euros, or 2.3% from 6,794 million euros in 2016 to 6,947 million euros in 2017.

  In particular:

  – revenues for the Mobile segment increased by 134 million euros, or 3.6%, from 3,759 million euros in 2016 to 3,893 million euros in 2017. Revenues from services increased by 105 million euros, or 3.2% relative to 2016, confirming the growth trend observed in previous quarters (+2.9% in the fourth quarter), due to the steady growth in mobile Internet and digital services, which sustained the ARPU levels;

  – revenues for the Fixed-line segment amounted rose by 225 million euros, or 6.3%, from 3,584 million euros in 2016 to 3,809 million euros in 2017. Revenues from services also confirmed the recovery underway since 2016, driven in particular by growth in the broadband and ultrabroadband customer bases and the overall resilience of ARPU levels.

- **Business**: revenues for the Business segment increased by 125 million euros, or 2.8%, from 4,531 million euros in 2016 to 4,656 million euros in 2017. From 2016 to 2017 the services segment grew by 21 million euros, or 0.5%, and the equipment and products segment grew by 104 million euros, or 22%.

  In detail:

  - Mobile revenues grew by 1.2% relative to 2016, driven by steady improvement in the services segment, which grew by 4.5% in the fourth quarter. In particular, growth in new digital services, which grew by 13% relative to 2016, offset the continuing decline in traditional services, which decreased by 9% in 2016, mainly as a result of voice services;

  - Fixed-line revenues rose by 111 million euros, or 3.2% relative to 2016, driven mainly by the equipment and product segment. Revenues from services remained substantially in line with the 2016, as lower prices and revenues from traditional services (connected with the technological shift towards VoIP systems) were offset by a 9.3% growth in revenues from ICT services.

  - **Wholesale**: revenues for the Wholesale segment declined by 90 million euros, or -5.1%, from 1,780 million euros in 2016 to 1,690 million euros in 2017, due to the absence of income from the sale of infrastructure (cable ducts and dark fiber/Backbone) to other operators, which had had a positive

impact on revenues for 2016. Growth of 88 million euros in revenues from access and ultrabroadband services in 2017 more than offset by a cut in regulated prices of 72 million euros.

- International Wholesale—Telecom Italia Sparkle group

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages and employees)			
Revenues	1,349	1,351	(2)	(0.1)
Of which third parties	1,152	1,136		
Operating profit	37	67	(30)	(44.8)
% of Revenues	*2.7*	*5.0*		
Employees at year-end (units)(1)	756	753	3	0.4

(1) Includes employees with temporary work contracts: nil units in 2017, 3 units in 2016.

In 2017, revenues for the Telecom Italia Sparkle group—International Wholesale were relatively stable declining by 2 million euros, or 0.1%, from 1,351 million euros in 2016 to 1,349 million euros in 2017. In particular, the growth in revenues from voice and mobile services was more than offset the decline in revenues from IP/Data services as a result of the expiry of long-term contracts.

Other income

In 2017, other income increased by 212 million euros, from 259 million euros in 2016 to 471 million euros in 2017. This item includes contribution fees resulting from partnership agreements, insurance indemnities and adjustments to estimated liabilities connected with customers and supplier accounts.

Operating profit

Operating profit in 2017 decreased by 604 million euros, or 17.9%, from 3,376 million euros in 2016 to 2,772 million euros in 2017, with an Operating profit margin of 18.1%, a decline of 4.4 percentage points from 2016 (22.5% in 2016). In particular, in 2017 Operating profit was negatively impacted by expenses totaling 912 million euros (182 million euros in 2016), relating to corporate restructuring and reorganization expenses, as well as disputes and business transactions, which peaked in the fourth quarter of 2017.

Operating profit was boosted by the positive performance in sales, and consequently in revenues, as well as by the cost optimization plan, which lowered industrial and general operating costs without reducing support for sales drives and service levels. The operating profit was also impacted by the change in the following line items included under operating expenses and shown in the table below.

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Acquisition of goods and services	6,235	5,785	450	7.8
Employee benefits expenses	3,266	2,759	507	18.4
Other operating expenses	704	574	130	22.6
Depreciation and amortization	3,360	3,310	50	1.5

In detail:

- **acquisition of goods and services** increased by 450 million euros compared to 2016. In detail:

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)		%
	(millions of euros, except percentages)			
Acquisition of goods	1,628	1,352	276	20.4
Revenues due to other TLC operators and interconnection costs	1,614	1,554	60	3.9
Commercial and advertising costs	751	656	95	14.5
Power, maintenance and outsourced services	949	980	(31)	(3.2)
Rent and leases	414	432	(18)	(4.2)
Other service expenses	879	811	68	8.4
Total acquisition of goods and services	**6,235**	**5,785**	**450**	**7.8**
% of Revenues	40.6	38.6		

- **employee benefits expenses** increased by 507 million euros, or 18.4%, from 2,759 million euros in 2016 to 3,266 million euros in 2017, due to the same factors that impacted employee benefits expenses at the Group level;
- **other operating expenses** increased by 130 million euros, or 22.6%, from 574 million euros in 2016 to 704 million euros in 2017.

The breakdown of the item is reported in the table below:

	Year ended December 31,			
	2017	2016	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages)			
Write-downs and expenses in connection with credit management	313	266	47	17.7
Provision charges	155	51	104	n.s.
TLC operating fees and charges	55	54	1	1.9
Indirect duties and taxes	91	94	(3)	(3.2)
Penalties, settlement compensation and administrative fines	33	44	(11)	(25.0)
Association dues and fees, donations, scholarships and traineeships	13	16	(3.0)	(18.8)
Sundry expenses	44	49	(5)	(10.2)
Total	**704**	**574**	**130**	**22.6**

- **depreciation and amortization**, increased by 50 million euros, or 1.5%, from 3,310 million euros in 2016 to 3,360 million euros in 2017.

Employees

The number of employees was 49,851 as of December 31, 2017, a reduction of 1,429 employees compared to December 31, 2016.

❖ **BRAZIL**

The following table sets forth certain financial and other data for the Brazil Business Unit for the years ended December 31, 2017 and 2016.

	Year ended December 31,					
	2017	2016	2017	2016	Changes	
			(a)	(b)	(a-b)	%
	(millions of euros, except percentages and employees)		(millions of Brazilian reais, except percentages and employees)			
Revenues	4,502	4,047	16,234	15,617	617	4.0
Operating profit	535	368	1,931	1,418	513	36.2
% of Revenues	*11.9*	*9.1*	*11.9*	*9.1*		
Employees at year-end (units)	9,508	9,849	9,508	9,849	(341)	(3.5)

Revenues

Revenues increased by 617 million reais, or 4.0%, from 15,617 million reais in 2016 to 16,234 million reais in 2017. Revenues from services increased by 754 million reais, or 5.1%, from 14,720 million reais in 2016 to 15,474 million reais in 2017.

Mobile Average Revenue Per User (ARPU) increased by 12.2% from 18.0 reais for 2016 to 20.2 reais for 2017, due to the general repositioning towards the postpaid segment and new commercial initiatives aimed at increasing data usage and the average spend per customer.

The total number of lines decreased by 4,784 thousand, or 7.5%, from 63,418 thousand in 2016 to 58,634 thousand in 2017, attributable to the prepaid segment, which declined by 7,701 thousand lines and was only partially offset by a 2,918 growth in the postpaid segment, also as a result of the consolidation underway in the market for second SIM cards. Postpaid customers represented 30.4% of the customer base at December 31, 2017, up 6.9 percentage points from 23.5% as of December 31, 2016.

Revenues from product sales declined by 137 million reais, or 15.3%, from 897 million reais in 2016 to 760 million reais in 2017. The decline reflected a change in the sales policy, which is now focused on value rather than increasing sales volumes. The main goals of the new strategy are to increase purchases of new connected devices, giving TIM customers access to broadband services on 3G/4G networks and to support new loyalty offerings for higher-value postpaid customers.

Operating profit

Operating profit grew by 513 million reais, or 36.2%, from 1,418 million reais in 2016 to 1,931 million reais in 2017. This result was attributable to both the positive performance of revenues and the benefits delivered by projects to enhance the efficiency of the operating expenses structure, launched in the second half of the previous year, which was partly offset by higher depreciation of 228 million reais relating to the development of industrial infrastructure, and a lower impact of net gains from disposals of assets of 39 million reais, mainly attributable to the sale of telecommunication towers. The last partial sale of telecommunications towers to American Tower do Brasil took place in the second quarter of 2017. This transaction resulted in proceeds and an income effect of an immaterial amount.

With regard to changes in operating costs, the following table sets forth certain expenses for the years ended December 31, 2017 and 2016.

	Year ended December 31,					
	2017	2016	2017	2016	Changes	
			(a)	(b)	(a-b)	%
	(millions of euros)		(millions of Brazilian reais, except percentages)			
Acquisition of goods and services	2,168	2,028	7,816	7,826	(10)	(0.1)
Employee benefits expenses	353	336	1,274	1,296	(22)	(1.7)
Other operating expenses	500	505	1,805	1,948	(143)	(7.3)
Change in inventories	6	(1)	20	(2)	22	
Depreciation and amortization	1,114	980	4,013	3,785	228	6.0

- **acquisition of goods and services** decreased by 10 million reais, or 0.1%, from 7,826 million reais in 2016 to 7,816 million reais in 2017;
- **employee benefits expenses**, decreased by 22 million reais, or 1.7%, from 1,296 million reais in 2016 to 1,274 million reais in 2017. In particular, employee benefits expenses in 2016 included other net costs for termination benefits of 56 million reais;
- **other operating expenses** decreased by 143 million reais, or 7.3%, from 1,948 million reais in 2016 to 1,805 million reais in 2017;
- **depreciation and amortization** increased by 228 million reais, or 6.0%, from 3,785 million reais in 2016 to 4,013 million reais in 2017.

Employees

Employees were 9,508 units at December 31, 2017, a decrease of 341 units compared to December 31, 2016 (9,849 units).

* * *

For further details on the agreement for the sale of telecommunication towers in Brazil, please see "Item 4. Information on the TIM Group—4.2 Business Units—4.2.2 Brazil".

5.3 LIQUIDITY AND CAPITAL RESOURCES

The TIM Group's policy is to manage financial risks (market risk, credit risk and liquidity risk) by defining, at a central level, guidelines for directing operations, identifying the most appropriate financial instruments to meet pre-determined objectives, monitoring the results achieved and excluding the use of financial instruments for speculative purposes.

TIM has a centralized Finance Department which operates in the interests of the entire Group:

- allocating liquidity where necessary;
- obtaining excess cash resources from the Group companies;
- guaranteeing an adequate level of liquidity compatible with individual needs;
- supporting its subsidiaries to gain access to the loan market; and
- providing financial consulting services to its subsidiaries.

These activities reduce the Group companies' need to seek bank lines and enable those companies to obtain better conditions from the banking system by constantly monitoring cash flows and ensuring a more efficient use of liquidity in excess of requirements.

Furthermore, the TIM Group has a centralized financial risk management policy for market, credit and liquidity risks. For additional details on funding and treasury policies and risk policies reference should be made to the "Note—Financial Assets (non-current and current)" and "Note—Financial risk management" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The TIM Group's goal is to achieve an "adequate level of financial flexibility" which is expressed by maintaining a treasury margin (composed by cash and cash equivalents, marketable securities and undrawn committed credit lines) to cover refinancing requirements at least for the next 12-18 months.

5.3.1 LIQUIDITY

TIM Group's primary source of liquidity is cash generated from operations and its principal use of funds are the payment of operating expenses, capital expenditures and investments, the servicing of debt and the payment of dividends to shareholders.

For additional details, reference should be made to the "Note—Financial Assets (non-current and current)" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The table below summarizes, for the periods indicated, the TIM Group's cash flows.

		Year ended December 31,			Changes	
		2018 (a)	2017 (b)	2016 (c)	(a-b)	(b-c)
		(millions of euros)				
Cash flows from (used in) operating activities	**(a)**	**4,592**	**5,399**	**5,706**	**(807)**	**(307)**
Profit (loss) from continuing operations		(1,152)	1,287	1,919	(2,439)	(632)
Adjustment for:						
Depreciation and amortization		4,255	4,473	4,291	(218)	182
Impairment losses (reversals) on non-current assets (including investments)		2,589	50	6	2,539	44
Net change in deferred tax assets and liabilities		(195)	(147)	38	(48)	(185)
Losses (gains) realized on disposals of non-current assets (including investments)		1	(11)	(15)	12	4
Share of losses (profits) of associates and joint ventures accounted for using the equity method		1	1	23	—	(22)
Change in provisions for employee benefits		(208)	437	(131)	(645)	568
Change in inventories		(99)	(30)	(10)	(69)	(20)
Change in trade receivables and net amounts due from customers on construction contracts		(49)	379	(310)	(428)	689
Change in trade payables		(163)	(605)	229	442	(834)
Net change in current income tax receivables/ payables		(210)	(515)	581	305	(1,096)
Net change in miscellaneous receivables/ payables and other assets/liabilities		(178)	80	(915)	(258)	995
Cash flows from (used in) investing activities	**(b)**	**(4,314)**	**(4,740)**	**(3,964)**	**426**	**(776)**
Purchase of intangible assets		(3,647)	(2,292)	(1,641)	(1,355)	(651)
Purchase of tangible assets		(2,831)	(3,477)	(3,467)	646	(10)
Total purchase of intangible and tangible assets on an accrual basis		(6,478)	(5,769)	(5,108)	(709)	(661)
Change in amounts due for purchases of intangible and tangible assets		1,947	455	450	1,492	5
Total purchase of intangible and tangible assets on a cash basis		(4,531)	(5,314)	(4,658)	783	(656)
Capital grants received		108	82		26	82
Acquisition of control of companies or other businesses, net of cash acquired		—	—	(10)	—	10
Acquisitions/disposals of other investments		(3)	(4)	(5)	1	1
Change in financial receivables and other financial assets (excluding hedging and non-hedging derivatives under financial assets)		96	466	175	(370)	291
Proceeds from sale that result in a loss of control of subsidiaries or other businesses, net of cash disposed of		—	—	492	—	(492)
Proceeds from sale/repayments of intangible, tangible and other non-current assets		16	30	42	(14)	(12)

		Year ended December 31,			Changes	
		2018 (a)	2017 (b)	2016 (c)	(a-b)	(b-c)
		(millions of euros)				
Cash flows from (used in) financing activities	**(c)**	**(1,830)**	**(1,210)**	**(1,263)**	**(620)**	**53**
Change in current financial liabilities and other		394	(1,188)	(437)	1,582	(751)
Proceeds from non-current financial liabilities (including current portion)		2,546	2,630	3,561	(84)	(931)
Repayments of non-current financial liabilities (including current portion)		(4,426)	(3,426)	(4,164)	(1,000)	738
Changes in hedging and non-hedging derivatives		(110)	997		(1,107)	997
Share capital proceeds/reimbursements (including subsidiaries)		22	16	4	6	12
Dividends paid		(256)	(235)	(227)	(21)	(8)
Changes in ownership interests in consolidated subsidiaries		—	(4)	—	4	(4)
Cash flows from (used in) Discontinued operations/Non-current assets held for sale	**(d)**	**—**	**—**	**(45)**	**—**	**45**
Aggregate cash flows	**(e=a+b+c+d)**	**(1,552)**	**(551)**	**434**	**(1,001)**	**(985)**
Net cash and cash equivalents at beginning of the year:	**(f)**	**3,246**	**3,952**	**3,216**	**(706)**	**736**
Net foreign exchange differences on net cash and cash equivalents	(g)	(63)	(155)	302	92	(457)
Net cash and cash equivalents at end of the year:	**(h=e+f+g)**	**1,631**	**3,246**	**3,952**	**(1,615)**	**(706)**

For further details please see the Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016 of the Consolidated Financial Statements included elsewhere in this Annual Report.

5.3.2 Capital Resources

Net Financial Debt

Net Financial Debt is a non-GAAP financial measure as defined in Item 10(e) of Regulation S-K under the 1934 Act. For further details please see "5.2.3—Non-GAAP Financial Measures".

On a consolidated basis, Net Financial Debt was 25,995 million euros at December 31, 2018, compared to 26,091 million euros at December 31, 2017 and to 25,955 million euros at December 31, 2016.

In our 2019-2021 Strategic Plan, we reaffirmed our commitment to maintaining strong financial discipline as a strategic priority. We expect the Group's Net Financial Debt to benefit, among other things, from planned efforts to increase efficiency.

Please see "Introduction—Cautionary Statement for Purposes of the "Safe Harbor" Provisions of the United States Private Securities Litigation Reform Act of 1995", included elsewhere in this Annual Report, for a discussion of factors which could cause our actual results to differ materially from the target discussed above. See, also, "Item 3. Key Information—3.1 Risk Factors".

There can be no assurance that we will be able to achieve the financial targets we have established.

Net Financial Debt as of December 31, 2018, 2017 and 2016 is set forth in the following table.

	As of December 31,		
	2018	2017	2016
	(millions of euros)		
Non-current financial liabilities	25,059	28,108	30,469
Current financial liabilities	5,913	4,756	4,056
Financial liabilities directly associated with Discontinued operations/Non-current assets held for sale	—	—	—
Gross financial debt (A)	**30,972**	**32,864**	**34,525**
Non-current financial assets (B)	**(1,594)**	**(1,768)**	**(2,698)**
Current financial asset:			
Securities other than investments	(1,126)	(993)	(1,519)
Financial receivables and other current financial assets	(340)	(437)	(389)
Cash and cash equivalents	(1,917)	(3,575)	(3,964)
Total current financial assets (C)	**(3,383)**	**(5,005)**	**(5,872)**
Financial assets relating to Discontinued operations/Non-current assets held for sale (D)	**—**	**—**	**—**
Financial assets (E=B+C+D)	**(4,977)**	**(6,773)**	**(8,570)**
Net financial debt (A+E)	**25,995**	**26,091**	**25,955**

The non-current portion of gross financial debt was 25,059 million euros at December 31, 2018, 28,108 million euros at December 31, 2017 and 30,469 million euros at December 31, 2016, and corresponds to 80.9% of total gross financial debt.

The TIM Group financial risk management policies aim to diversify market risks, hedging exchange rate risk in full and optimizing interest rate exposure through an appropriate diversification of the portfolio, which is also achieved through the use of carefully selected derivative financial instruments. Such instruments are not used for speculative purposes and all have an underlying, which is hedged.

Furthermore, in order to determine its exposure to interest rates, the Group defines an optimum composition for the fixed-rate and variable-rate debt structure and uses derivative financial instruments to achieve that prefixed composition. Taking into account the Group's operating activities, the optimum mix of medium/long-term non-current financial liabilities has been established, on the basis of the nominal amount, in a range of 65%-75% for the fixed-rate component and 25%-35% for the floating-rate component.

In managing market risks, the Group has adopted the Guidelines for the "Management and control of financial risk" and mainly uses Interest Rate Swaps (IRS) and Cross Currency Interest Rate Swaps (CCIRS). For further details, please see Note—Financial risk management, included elsewhere in this Annual Report.

CHANGE IN NET FINANCIAL DEBT DURING 2018

The following table summarizes the main transactions which had an impact on the change in net financial debt during 2018:

	(millions of euros)
Net financial debt as of December 31, 2017	**26,091**
Capital expenditures	6,408
Increase in finance leasing contracts	70
Dividends paid	256
Financial investments	6
Share capital increases/decreases	(22)
Disposal of investments and other divestitures	(18)
Cash flows from operating activities, net of other uses (sources)	(6,796)
Net change in 2018	(96)
Net financial debt as of December 31, 2018	**25,995**

In particular:

- **Capital expenditures on an accrual basis** were 6,408 million euros in 2018. The breakdown is as follows:

	Year ended December 31,						
	2018		2018 comparable		2017		Changes
		% of total	(a)	% of total	(b)	% of total	(a-b)
	(millions of euros, except percentages)						
Domestic	5,518	86.1	5,634	85.9	4,551	79.8	1,083
Brazil	890	13.9	924	14.1	1,150	20.2	(226)
Other activities	—	—	—	—	—	—	—
Adjustments	—	—	—		—	—	—
Total consolidated capital expenditures	**6,408**	**100.0**	**6,558**	**100.0**	**5,701**	**100.0**	**857**
% on revenues	*33.8*		*34.3*		*28.8*		

With the introduction of IFRS 15, Mobile customer acquisition costs, relating to contracts with minimum-duration lock-in clauses, are no longer capitalized and depreciated. Instead they are classified as "deferred contract costs" and subsequently recognized in the income statement over the term of the contract.

On the same accounting basis, capital expenditures in 2018 totaled 6,558 million euros (5,701 million euros in 2017). In particular:

- the **Domestic Business Unit** reported expenditures equal to 5,634 million euros (4,551 million euros in 2017). Net of the acquisition of rights to use 5G frequencies (2,399 million euros) at the end of 2018 and the renewal of the GSM license in 2017 (630 million euros), capital expenditures were down by 686 million euros, mainly attributable to the coverage levels of fixed and mobile networks already achieved;
- the **Brazil Business Unit** posted 924 million euros of capital expenditures in 2018, 226 million euros less than for 2017. Without the impact of fluctuations in exchange rates (-187 million euros), the change was a negative 39 million euros. Capital expenditures of the Business Unit were targeted primarily at strengthening mobile ultra-broadband network infrastructure and developing the fixed broadband business of TIM Live.

- Increase in finance leasing contracts. In 2018, this item was equal to 70 million euros (68 million euros in 2017) and mainly refers to the higher value of finance lease assets and related higher financial payables recognized mainly following the recognition of vehicle lease agreements as finance leases, in accordance with IAS 17, by the Domestic Business Unit.

- **Disposal of investments and other divestitures.** This item shows a positive figure of 18 million euros and mainly refers to disposals of assets within the normal operating cycle.

  In 2017, the item posted a positive balance of 33 million euros, mainly reflecting the disposal of 17 million euros of tangible assets and the collection of a deferred 13 million euros of the sale price of a non-controlling interest sold in previous years.

- **Share capital increases/reimbursements, including incidental costs.** These totaled 22 million euros in 2018 and essentially consisted of contributions from an external shareholder of the Group for new capital issued by a subsidiary (16 million euros in 2017).

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The following should also be taken into account with respect to net financial debt:

- Sales of receivables to factoring companies

  Sales without recourse of trade receivables to factoring companies completed during 2018 resulted in a positive effect on net financial debt at December 31, 2018 of 2,004 million euros (2,000 million euros at December 31, 2017).

Change In Net Financial Debt During 2017

The following table summarizes the main transactions which had an impact on the change in net financial debt during 2017:

	(millions of euros)
Net financial debt as of December 31, 2016	**25,955**
Capital expenditures	5,701
Change in finance lease contracts	68
Dividends paid	235
Financial investments	12
Share capital increases/decreases	(16)
Disposal of investments and other divestitures	(33)
Cash flows from operating activities, net of other uses (sources)	(5,831)
Net change in 2017	**136**
Net financial debt as of December 31, 2017	**26,091**

In particular:

- **Capital expenditures on an accrual basis** were 5,701 million euros in 2017, an increase of 825 million euros compared to 2016. The breakdown is as follows:

	Year ended December 31,				
	2017		2016		Changes
	(a)	% of total	(b)	% of total	(a-b)
	(millions of euros, except percentages)				
Domestic	4,551	79.8	3,709	76.1	842
Brazil	1,150	20.2	1,167	23.9	(17)
Other activities	—	0.0	—	0.0	—
Adjustments	—	—	—	—	—
Total consolidated capital expenditures	**5,701**	**100.0**	**4,876**	**100.0**	**825**
% on revenues	*28.8*		*25.6*		

- the **Domestic Business Unit** posted capital expenditures of 4,551 million euros, an increase of 842 million euros compared to 2016. Higher capital expenditure was driven by an expense of 630 million euros to renew GSM frequency user rights and the fast-tracking of innovation expenditure for infrastructure development. This expense was 395 million euros in 2016. In particular, expenditure on network development and next-generation services accounted for 63% of total network expenditure in 2017, a 6.3 percentage point increase compared to 2016. The decrease in other types of expenditure continued thanks to the selectivity and attention given to capital allocation choices based on strategic priorities and profit optimization;
- the Brazil Business Unit posted capital expenditures in 2017 of 1,150 million euros, a decrease of 17 million euros on 2016. Without the impact of fluctuations in exchange rates, which amounted to 82 million euros, the change was a decline of 99 million euros and mainly reflected lower expenditure for renewals of TLC licenses by 52 million euros and for developments in Information Technology projects by 47 million euros, following the strong growth recorded in 2016 due to the launch of new commercial offers and the introduction of the new billing system. Capital expenditure in network infrastructure in 2017 amounted to 806 million euros, a 3 million euro decline at constant exchange rates compared to 2016), and was mainly aimed at developing the 4G mobile broadband network, reaching 3,003 towns, an increase of 1,748 towns in 2017, with an urban population coverage rate of 91.2%.
- **Change in finance lease contracts**. In 2017, the item totaled 68 million euros, of which 54 million euros referred to the Parent and 14 million euros to the Brazil Business Unit. The total amount referred to the closure of projects recognized under the item in the previous year.

  In 2016, the item amounted to 232 million euros and essentially referred to contractual renegotiations by TIM S.p.A. within the real estate transformation project, new rental agreements for industrial vehicles, and a finance lease entered into by the Tim Brasil group on telecommunication towers.
- Financial **investments.** In 2017, the item amounted to 12 million euros and included 4 million euros in subscriptions of new units issued by the Northgate Fund.

  In 2016 this item amounted to 15 million euros and mainly consisted of the following:

  - 6 million euros for the payment made by INWIT S.p.A., net of the cash acquired, for the acquisition of the investments in Revi Immobili S.r.l., Gestione Immobili S.r.l. and Gestione Due S.r.l.; such companies were subsequently merged with and into INWIT;
  - 5 million euros for the subscription of units in the company Northgate Telecom Innovations Partners L.P. Fund;
  - 4 million euros for the payment, net of the cash acquired, for the acquisition of the investment in Noverca S.r.l.
- Disposal **of investments and other divestitures**. The item posted a positive balance of 33 million euros for 2017 and mainly reflected the sale of non-current assets during the normal operating cycle, for 17 million euros, and the collection of a deferred portion of the price of a non-controlling interest sold in previous years, in the amount of 13 million euros.

  In 2016, the item posted a positive figure of 745 million euros and principally relates to:

  - the sale of the Sofora—Telecom Argentina group for 704 million euros, 545 million euros representing the price and 159 million euros for the deconsolidation of the related net financial debt, with the remaining amount relating to disposals of assets as part of normal operations;
  - the proceeds of 134 million reais (corresponding to approximately 35 million euros) realized by the Brazil Business Unit in 2016 from the sale of telecommunications towers.
- **Share capital increases/reimbursements, including incidental costs.** These totaled 16 million euros in 2017 and essentially consisted of contributions from an external shareholder of the Group for new capital issued by a subsidiary.

  In 2016, the item amounted to 1,304 million euros and included the effect of the conversion of the Mandatory Convertible Bond into TIM shares for 1,300 million euros of November 2016.

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The following should also be taken into account with respect to net financial debt:

- **Sales of receivables to factoring companies**

  Sales of trade receivables to factoring companies finalized in 2017 resulted in a positive effect on net financial debt at December 31, 2017 of 2,000 million euros compared to 1,091 million euros at December 31, 2016. The increase results from the realization of new revolving securitization programs (handset, modem and mobile billed) and from the identification of a greater volume of sales of receivables.

Gross Financial Debt

At December 31, 2018, on a consolidated basis, our gross financial debt amounted to 30,972 million euros, compared to 32,864 million euros at December 31, 2017, and included non-current financial liabilities (long-term debt) of 25,059 million euros, compared to 28,108 million euros at December 31, 2017 and current financial liabilities (short-term debt) of 5,913 million euros, compared to 4,756 million euros at December 31, 2017.

As of December 31, 2017, approximately 74.8% of our gross financial debt was denominated in Euro, while the remainder was primarily denominated in U.S. Dollars, Pound Sterling and Brazilian Reais.

The following table sets out the currency composition of our gross financial debt:

	As of December 31, 2018		As of December 31, 2017	
	(millions of foreign currency)	(millions of euros)	(millions of foreign currency)	(millions of euros)
USD	6,450	5,633	7,168	5,977
GBP	1,267	1,416	1,266	1,427
BRL	2,609	588	5,863	1,478
JPY	20,033	159	20,031	148
EURO		23,176		23,834
Total gross financial debt		**30,972**		**32,864**

For information regarding the split of our debt between fixed rate and floating rate please see Note "Financial risk management" of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report.

Long-term debt includes notes we have issued in order to reduce our dependence on short-term debt, extend the average life of our financial debt and expand our investor base. For this purpose, we have issued long-term debt in the capital markets under, among others:

Active programs:

- the TIM Euro Medium Term Note ("**EMTN**") Programme. The maximum amount permitted to be issued under the Programme, including multiple tranches and multiple currencies, is 20 billion euros. This is the Group's only active debt program although it can issue debt instruments on an ad hoc basis if needed.

Inactive programs:

- the **Shelf Registration Statement**, which expired on December 29, 2011, for the issuance, by TIM S.p.A.'s wholly-owned subsidiary Telecom Italia Capital S.A. and under a guarantee by TIM S.p.A., of an indeterminate amount of debt securities at various terms, rates and maturities;
- the **Olivetti Euro Medium Term Note Programme**, for the issuance of a total amount of 15 billion euros in debt (or the equivalent in other currencies), at various terms, rates and maturities; and
- the Old Telecom Italia Global Medium Term Note Program ("**Global Note Program**"), for the issuance of a total amount of U.S.$12 billion in debt (or the equivalent in other currencies), at various terms, rates and maturities.

The following table highlights the utilization of the above mentioned EMTN Programme at the end of 2018.

		As of December 31, 2018 EMTN Programme (millions of euros)
Total amount of the program (max outstanding notes)	(A)	**20,000.00**
Notes and bonds issued		31,552.79
Notes and bonds repaid		(18,504.43)
Net utilization of the program	(B)	**13,048.36**
Remaining available amount of the program	(A-B)	**6,951.64**

Notes and bonds

At December 31, 2018 we had notes and bonds outstanding amounting to 21,497 million euros, compared to 22,202 million euros at December 31, 2017. The nominal repayment amount at December 31, 2018 was 21,021 million euros, a decrease of 754 million euros compared to 21,775 million euros at December 31, 2017.

Changes in bonds during 2018 were as follows:

	Currency	Amount (millions)	Issue date
NEW ISSUES			
Telecom Italia S.p.A. 750 million euros 2.875% maturing 28/01/2026	Euro	750	28/06/18

	Currency	Amount (millions)	Repayment date
REPAYMENTS			
Telecom Italia S.p.A. 593 million euros 4.750%(1)	Euro	593	05/25/18
Telecom Italia S.p.A. 677 million US dollars 6.999%(2)	USD	677	06/04/18
Telecom Italia S.p.A. 582 million euros 6.125%(3)	Euro	582	12/14/2018

(1) Net of buy-backs totaling 157 million euros made by the company in 2015.

(2) Net of the securities bought back by TIM S.p.A. (323 million USD) on July 20, 2015.

(3) Net of buy-backs totaling 168 million euros made by the company in 2015.

With reference to Telecom Italia S.p.A. 2002–2022 bonds, reserved for subscription by employees of the Group, the nominal amount at December 31, 2018 was 203 million euros, down by 1 million euros compared to December 31, 2017 (204 million euros).

On January 11, 2019, TIM S.p.A. issued a bond for 1,250 million euros, maturing on April 11, 2024, with coupon equal to 4.000%, issue price 99.436%, repayment price 100%. The issue is part of the maturing debt optimization and refunding process.

For further details about the outstanding notes and bonds as of December 31, 2018 please see also "Note— Financial liabilities (non-current and current)" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

Revolving Credit Facility and Term Loan

The following table shows the composition and the drawdown of the committed credit lines available at December 31, 2018.

	As of December 31, 2018		As of December 31, 2017	
	Committed	Drawdown	Committed	Drawdown
	(billions of euros)			
Revolving Credit Facility—expiring May 2019	—	—	4.00	—
Revolving Credit Facility—expiring March 2020	—	—	3.00	—
Revolving Credit Facility—expiring January 2023	5.00	—	—	—
Total	**5.00**	**—**	**7.00**	**—**

On January 16, 2018, two syndicated Revolving Credit Facilities existing at December 31, 2017 were closed in advance and replaced by a new syndicated Revolving Credit Facility for a total of 5 billion euros, maturing on January 16, 2023, currently not drawn.

At December 31, 2018, TIM had bilateral Term Loans for 1,475 million euros and overdraft facilities for 250 million euros, drawn down for the full amount.

Maturities of financial liabilities and average cost of debt

The average maturity of non-current financial liabilities (including the current portion of medium/long-term financial liabilities due within 12 months) was 7.62 years.

The average cost of the Group's debt, considered as the cost for the year calculated on an annual basis and resulting from the ratio of debt-related expenses to average exposure, stood at approximately 4.4%.

For details on the maturities of financial liabilities in terms of expected nominal repayment amounts, as contractually agreed, see the Notes "Financial liabilities (non-current and current)" in the Consolidated Financial Statements at December 31, 2018 of the TIM Group.

Current financial assets and liquidity margin

The TIM Group's available liquidity margin amounted to 8,043 million euros, equal to the sum of:

- "Cash and cash equivalents" and "Current securities other than investments" totaling 3,043 million euros (4,568 million euros at December 31, 2017), also included 545 million euros of repurchase agreements, of which 450 million euros maturing in January 2019 and the remaining portion maturing in March 2019;
- the new Revolving Credit Facility opened in January 2018 for 5,000 million euros.

This margin is sufficient to cover Group financial liabilities falling due over the next 24–36 months.

In particular:

- **Cash and cash equivalents** amounted to 1,917 million euros (3,575 million euros at December 31, 2017). The different technical forms of investing available cash can be analyzed as follows:
  - Maturities: investments have a maximum maturity of three months;
  - Counterparty risk: investments by the European companies are made with leading banking, financial and industrial institutions with high credit quality. Investments by the companies in South America are made with leading local counterparties;
  - Country risk: deposits have been made mainly in major European financial markets.

Current securities other than investments amounted to 1,126 million euros (993 million euros at December 31, 2017): These forms of investment represent alternatives to the investment of liquidity with the aim

of improving returns. They included a total of 558 million euros of Italian treasury bonds purchased by TIM S.p.A. (252 million euros), Telecom Italia Finance S.A. (296 million euros) and Inwit S.p.A. (10 million euros), as well as 387 million euros of bonds purchased by Telecom Italia Finance S.A. with different maturities, all with an active market and consequently readily convertible into cash, and 181 million euros of investments in monetary funds by the Brazil Business Unit. The purchases of the above government bonds, which, pursuant to Consob Communication no. DEM/11070007 of August 5, 2011, represent investments in "Sovereign debt securities", have been made in accordance with the Guidelines for the "Management and control of financial risk" adopted by the TIM Group since August 2012.

For further details please see "Note—Financial Risk Management" of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report.

Treasury policies

The Group uses a variety of instruments to finance its operations and raise liquidity, in particular bond issues, alongside committed and uncommitted bank lines.

Off-Balance Sheet Arrangements

Guarantees, net of back-to-back guarantees received, amounted to 33 million euros.

The guarantees provided by third parties to Group companies, amounting to 6,979 million euros, refer to guarantee financing from banks and other financial institutions consisting of guarantees for loans received (1,255 million euros) and of performance guarantees under outstanding contracts (5,724 million euros).

In particular:

- The TIM Group issued six guarantees to the Ministry of Economic Development for a total of 1,922 million euros for the deferment of the payment of the amount due for the acquisition of the user rights to frequencies in the 694-790 MHz, 3600-3800 MHz and 26.5-27.5 GHz bands, which will be reserved for 5G mobile telecommunications services.
- The insurance guarantees, which totaled 739 million euros, basically refer to guarantee financing by the TIM Group in applying legal provisions for contracts of Public Administrations and similar bodies.

In May 2018, as mentioned above, TIM issued a surety to the Prime Minister's Office for 74.3 million euros to secure an appeal to the Lazio Administration Court for a provisional stay of the administrative fine levied on TIM following the preliminary investigation connected with the penalty proceeding initiated under Article 2 of Decree Law 21 of March 15, 2012 (the "Golden Power rule").

For further details please see "Note—Contingent liabilities, other information, commitments and guarantees" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

Contractual Obligations and Commitments

The following table aggregates our contractual obligations and commitments with definitive payment terms which will require significant cash outlays in the future based on nominal amounts.

As of December 31, 2018, the **nominal repayment amounts of payables** and the relating expiration dates were as follows:

	Amounts due as of December 31,						
	2019	2020	2021	2022	2023	After 2023	Total
	(millions of euros)						
Bonds	2,446	1,267	564	3,087	2,419	11,238	21,021
Amounts due to banks, other financial payables and liabilities	1,293	384	1,343	819	331	221	4,391
Finance lease liabilities	190	181	172	132	130	1,124	1,929
Total	**3,929**	**1,832**	**2,079**	**4,038**	**2,880**	**12,583**	**27,341**
Current financial liabilities	1,308	—	—	—	—	—	1,308
Total	**5,237**	**1,832**	**2,079**	**4,038**	**2,880**	**12,583**	**28,649**

For further details please see also "Note—Derivatives" and "Note—Other information, Operating leases" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

5.3.3 Capital Expenditures

The table below sets forth, for the periods indicated, our total capital expenditures (on an accrual basis) allocated to the Business Units.

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Capital expenditures on tangible assets:			
Domestic	2,133	2,788	2,596
Brazil	628	621	639
Adjustments and eliminations	—	—	—
Total capital expenditures on tangible assets(1)	**2,761**	**3,409**	**3,235**
Capital expenditures on intangible assets(2)	**3,647**	**2,292**	**1,641**
Total capital expenditures(3)	**6,408**	**5,701**	**4,876**

(1) Capital expenditures on tangible assets are mainly related to local and long distance networks, exchange equipment, investments in subscribers' equipment, radio and transmission equipment.

(2) Capital expenditures on intangible assets include expenditures for software for telecommunications systems and licenses.

(3) Intercompany capital expenditures are adjusted to eliminate intercompany profit.

The capital expenditures planned for the 2019-2021 period at the TIM Group level in Italy and in Brazil are:

- approximately 3 billion euros in Italy per year;
- approximately 12.5 billion reais, in Brazil.

* * *

For details about market risk disclosures please see "Item 11. Quantitative And Qualitative Disclosures About Market Risks".

5.4 RESEARCH AND DEVELOPMENT

Research and Development in Italy

Approach to innovation, choice of topics, innovation governance process

Innovation understood as a research and development activity for innovative technologies and services, processes and business models represents a key factor in the company's ability to keep up with the profound transformations brought about through ICT, as well as a necessary asset acting as a driving force in this evolution in terms of its customers and the national system, helping to overcome the socio-cultural barriers that limit the opportunity to participate in the information society and enjoyment of the relative benefits.

TIM has always considered innovation to be a strategic asset and takes great care in governing individual aspects, from its strategic role to its responsibility, objectives and policy.

Both technological and business-based innovation are considered in 2018 as central elements to the response to change in the technological, market and competitive context. In line with this, the Group has acted in several ways:

- by continuing the action underway since 2016, to strengthen internal innovation lines, focusing laboratory activities and research groups on key aspects of the development of the fixed and mobile network towards future 5G standards and ultrabroadband, and issues concerning service platforms and new operations systems;
- by confirming the drive towards the "Open Innovation" principle with the aim of maximizing the benefits deriving from the integration of innovative contributions generated internally with external sources of innovative ideas;
- by interacting with the start-up world in order to catalyze their start-up capacity for innovation through the TIM #Wcap acceleration program; and
- by implementing initiatives which allow for the growth of co-creation ecosystems like the IoT Open Lab, a laboratory dedicated to the development of IoT solutions based on key technologies for the Telco Operator with a view to open innovation.

More specifically, innovation management is overseen, with different missions, by the Technology Architectures & Innovation Department and by engineers, but involves various internal and external stakeholders of the company:

- other areas of the company involved from time to time, both as internal customers for the innovation output solution and as centers of expertise on the topic;
- traditional and digital partners, for the joint go2market of digital services;
- research centers and universities, for cooperation and joint projects. In 2018, 18 research contracts came into effect, for a total value of 840,000 euros;
- Standardization Bodies and Associations: TIM remains very active within the main Standardization Bodies and Associations, with 27 memberships in 2018, for a cost of 900,000 euros. On a national, but above all international, level there is a broad circle made up of standardization bodies (ETSI, ITU, CENELEC and 3GPP among others), associations (GSMA and NGMN to name the major ones), alliances (oneM2m and BBF), and telco open communities (ONF, OPNFV and CORD), which play a fundamental role in the evolution of the TLC industry for networks, platforms and services;
- Ministries (Ministry of Economic Development and Ministry of Education, Universities and Research), the European Union and public authorities (CNR and local authorities) for projects funded through participation in competitive tenders, and partnership initiatives. In particular, two specific consortiums were set up in 2018: KIC U-Move, the Community for Knowledge and Innovation in urban mobility, promoted by the European Institute of Innovation and Technology (EIT), with the support of the EU, in order to promote urban mobility, and Competence Industry Manufacturing 4.0 (CIM 4.0), set up in December 2018 after the award of the Ministry of Economic Development Industry 4.0 contract, to help fast track the process to transform a considerable section of the production system at local and national level, and act as an integrated hub for the dissemination of expertise and good practices, offering training and on-site experience, in technological and industrial sectors in Piedmont and other Italian regions. The Ministry of Economic Development will fund the consortium projects over the next three years.

TIM's technological evolution is based on CTO Technology Strategy, which identifies technology strategy in terms of guidelines, specific technologies and roadmaps to adopt in the long term. The three-year technological plan is the reference policy for the Group and includes the technological evolution plans of subsidiaries. The plan sets out the main external factors that may affect company strategies (regulation, standards, suppliers, other market operators) and establishes the company entities involved, the applicable technological architecture and evolution of specific technologies, along with relative roadmaps for deployment or assessment. The qualitative and quantitative long term goals have been given an annual framework. They are defined so that they can be objectively measured in compliance with quality standards (ISO 9001) and environmental standards (ISO 14001), and operational innovation processes, in the same way as TIM processes, in general, are based on TMF's reference standard E-Tom.

Overall, in 2018 TIM committed around 1,300 people to working on technological innovation and engineering in Italy, for an overall investment, for TIM S.p.A., of 1,165 million euros, which is equivalent to around 8% of revenues.

Activities for the future of mobility and networks: initiatives for 5G

In October 2018, the tender of the Ministry of Economic Development for the award of user rights to 694-790 MHz, 3600-3800 MHz, and 26.5-27.5 GHz band frequencies for 5G mobile telecommunications services was completed, with an overall undertaking for TIM of 2,399 million euros. The rights to 3600-3800 MHz and 26.5-27.5 GHz band frequencies were assigned on a definitive basis in January 2019, while the rights to 694-790 MHz band frequencies will be made available in July 2022. 5G allows not only faster speeds than those possible with earlier technologies, but also a multitude of services with very different requirements, in particular in the mMTC[7] and URLLC[8] areas.

TIM has followed the development of 5G from 2012, actively participating in the definition of international standards as well as European consortia and projects which laid the foundations for the system and contributed to the introduction of innovative use cases and applications. In particular, TIM participated in the European Horizon 2020 METIS and METIS II projects included in the 5GPPP European initiative and in another 12 projects concerning all the main technological turning points of 5G, collaborating with the main providers of network technologies and terminals through specific MoUs.

The operational activities for technological development and 5G trials are accompanied by structured technical communication ranging from publishing to promotion with events of a scientific scope. Several initiatives dedicated to 5G took place during 2018, including the inauguration of the first Innovation Hub in Rome, which was the cornerstone of the agreement. Another important event was held in Turin, at Palazzo Madama, when TIM opened its doors to the public with live demos of 5G services, including automotive, digital tourism, Industry 4.0 and smartcity services, which will soon be available on the network. In Turin, TIM will develop the first 5G network in Italy, pursuant to an agreement with the local authorities, following on from three important projects started in 2017—Torino 5G, San Marino 5G and Bari-Matera 5G—for 5G coverage of these municipalities, involving over 55 partners.

In 2018, these projects continued, consolidating activities to provide coverage, with San Marino becoming the first European microstate to be covered by 5G. Research and partnerships with organizations and universities involved for Bari-Matera were also set up and activities will continue in 2019.

Over the next few years, we believe 5G will be the revolution that everyone can experience in their daily lives.

Main applications will target:

- the automotive and transport sector with vehicle-to-vehicle and vehicle-to-infrastructure connectivity, aimed at increasing safety and energy saving, connectivity for infotainment, self-driving vehicles and related aspects;

7 Massive Machine Type Communication

8 Ultra Reliable and Low Latency Communications

- industry 4.0 (i.e., the digital transformation of industry), the systematic addition of sensors to products to produce data to improve production and processes, the evolution of the supply chain to enable real-time management of relations with suppliers and end customers;
- the world of new media, with changes in user trends and new formats, including virtual and enhanced reality solutions;
- healthcare with remote assistance to enable specialists to assist patients with chronic diseases from afar;
- public safety with mobile video surveillance solutions that can integrate data and images for a far broader vision, promoting greater public security levels than the past;
- assistance for tourists who can have information and multimedia content on their visits at their fingertips, thanks to sensors on their smartphones; and
- the information sector in general which can ensure "live" connections with a better video quality without complex instruments, thanks to a greater bandwidth availability, combined with a reduced latency.

IoT Open Lab

In November 2016, TIM opened the IoT Open Lab, which became fully operational in 2017, at its base in Turin. Its purpose, according to the methods inherent in Open Innovation, is to support the development of IoT solutions based on key technologies for Telco Operators. In particular, the IoT Open Lab acts as a business accelerator to support companies in entering the ecosystem of technologies standardized by the 3GPP and, as regards the current period, Narrow Band IoT technologies. In 2018, more than 180 companies and customers visited the Lab, and among them, around fifty construction companies agreed a partnership with TIM allowing them to use the Lab's facilities free of charge.

Research with Universities

The Open Innovation activities (known as R&D participatory behavior) for 2018 were largely concentrated on the new Innovation model pursued at TIM and guided by top management. Research and development activities in 2018 focused on infrastructure issues and application solutions with a particular emphasis on opportunities afforded by 5G.

As previously disclosed, the financial commitment amounted to 840,000 euros, involving 70 TIM technicians and 60 university researchers dedicated to specific research, including:

- research projects on cognitive computing, artificial intelligence solutions and 5G in partnership with Turin Polytechnic;
- an academic research partnership with various academic organizations as part of the the Ministry of Economic Development Bari-Matera 5G project with full 5G coverage of cities scheduled for 2019, with 10 application areas started and over 70 use scenarios. In 2021, the entire metropolitan area of the 2 cities will be covered;
- research projects started also in partnership with the University of Catania under the technology/innovation plan to fast-track the market delivery of the entire IoT ecosystem and 5G development activities.

Funded research activities

TIM has always been active in innovation and research initiatives funded by the European Commission and by national public administrations. This has enabled it to obtain funding of nearly 14 million euros over the 2016-2018 period and to take part in projects with a high innovation content, thanks to which it has been able to develop and consolidate its own know-how in sectors with a fast-paced technological evolution, working together with leading European, North American, Korean and Japanese research centers. TIM has been involved in activities carried out as part of funded projects concerning 5G, virtualization and intelligent mobility services, furthering its expertise and gaining a prominent position in the international sphere.

Patents and Intellectual Property Rights

During 2018, the Group's portfolio of patents grew to include new patents filed, and was streamlined, eliminating certain patents that were no longer considered valuable investments, given advances in technological progress. TIM ranks sixth as the Italian company for number of European patents filed.

The patenting areas relate to the whole ICT sector, with areas of excellence in the mobile sector, where TIM is one of the six leading Telcos worldwide.

Specifically, TIM's portfolio of patents included 3,256 patents held by TIM in 2018, of which 2,754 were granted in 41 countries around the world and 502 published in 15 patent offices, relative to some 600 inventions.

A total of 11% of our patented inventions stem from work with universities and research institutes, from 1997 to the present day.

Participation in a Patent Pool for LTE with a patent essential for the relative standard should also be noted. The Patent Pool acquired new participants over the course of the year (bringing the current total to 19 license-holders) and granted several licenses to 42 companies.

Research and Development in Brazil

The Innovation & Technology Department, headed by the CTO of TIM Participações, is responsible for Research and Development (R&D) activities. Its main areas of focus include: identifying technological innovation for the network and the evolutionary needs for new technologies and devices, setting architectural guidelines, and the development of strategic partnerships, so as to exploit new business models and guarantee the evolution of the network infrastructure in line with the business strategy. The organizational structure of Innovation & Technology is currently made up of 25 people in the Networks area, including telecommunications engineers, electrics and electronics engineers, IT experts and other technicians of various origins, competences and experiences, who cover all innovative needs and provide support to R&D.

In terms of infrastructure, one important result was the establishment of TIM Lab, a multi-purpose test environment focusing on innovation, which is able to guarantee the assessment of innovative services, products and technologies, certifying their functional efficiency and performance and the development of new models and configurations, consolidating the innovation flow. TIM Lab plays a strategic role in providing support for the conduct of Credibility Test, Trials and Proof of Concept (POC), for the validation of the services in collaboration with the main suppliers of technology and partners, through the sharing of knowledge and the technological infrastructures for interoperability tests, the assessment of capacity and the definition of technical requirements; in synergy with the R&D department, it facilitates innovation and promotes collaborations with universities and research institutes.

In January 2017, a new TIM Lab Innovation Center was opened at the Corporate Executive Offices complex in Barra da Tijuca, in the state of Rio de Janeiro: a building with a surface area of 650 square meters, able to accommodate more than 60 people. This new office hosts technicians and researchers and can be seen as a space of innovation open to new opportunities and the development of innovation for the Brazilian telecommunications market, also operating as a national reference point for R&D activities.

In 2018, more than 180 validation and innovation projects were concluded. Moreover, new technological areas, such as transport and fixed access solutions, were included in the range of initiatives relating to innovation and R&D. In this regard, more than 22 million reais were invested in the 2016/17 period, also for new lab premises, in addition to the 4 million reais in 2018; based on the 2019-2021 plan, further investments of 12 million reais have been allocated.

The Innovation & Technology department continued to work on projects and initiatives aiming to ensure the evolution of the business of TIM Participações through the recommendation of sustainable, efficient network platforms and "disruptive" models, including anticipating the availability of new services. These projects can be divided into the following groups:

- new generation networks;

- positive environmental and social impacts; and
- Open Lab initiatives.

Next generation network projects

The reassignment of the 1,800 MHz, 850 MHz and 2,100 MHz bandwidths from 2G/3G to 4G gives TIM Participações three important competitive advantages:

- reduction of costs for LTE deployment;
- expansion of the LTE coverage area and activation of the Carrier Aggregation strategy, improving the customer experience through higher "throughputs";
- improved indoor coverage. In addition to the expansion of coverage, use of the 850/1,800/2,100 MHz bandwidths could increase the capacity in cities already covered by the LTE bandwidth at 2.6 GHz, at limited additional cost.

Another important consideration in this scenario is that over 94% of current LTE terminals are already compatible with the 1,800 MHz and 2,600 MHz bandwidths, and with the other bandwidths available; hence, implementation of the LTE multilayer is proving to be an excellent strategy that benefits from the dissemination of devices.

The deployment of the LTE 700 MHz layer will result in significant expansion of the coverage and indoor penetration, promoting the presence of LTE throughout the national territory and consolidating TIM Brasil's leadership in LTE. The actual roll-out will follow the rules dictated by the EAD[9] in order to manage the spectrum cleaning and avoid interference problems with the analogue TV transmission service. 82% of the LTE devices employed by the current users of TIM Participações services are enabled for the 700 MHz bandwidth.

At the end of 2018, over 1,400 cities could test the LTE 700 MHz coverage.

In 2015, as part of the IP Multimedia Network Evolution, three tests were carried out at the Innovation Lab to assess the IMS[10]. In 2016 the tests were extended to live networks, allowing TIM Participações to set up the functional infrastructure to provide services such as Voice over LTE (VoLTE), Video over LTE (ViLTE) and Wi-Fi Calling, entirely laid on IP and activated by an IMS platform. In 2017 TIM launched VoLTE high definition voice call services on the market, providing call services without the need to pass through switched lines. At the end of 2018, over 2,500 cities could use this service.

Projects with positive environmental and social impacts

The expansion of "4G RAN sharing", in partnership with other Brazilian mobile operators, aims to define the architectural requirements, technical assumptions and specifications for the "LTE RAN sharing" solution, optimizing the network resources and costs. In this regard, TIM has pursued and considered RAN Sharing Solutions since 2007. Another strong motivation lies in coverage issues and timing in compliance with regulatory requirements. The RAN Sharing agreement allows TIM to promote the evolution of LTE development in rural areas of Brazil, with effective sharing of access and backhauling. At present 4G RAN Sharing relies on two national partners, improving the possible benefits and efficiencies of this technical model.

Following continuous testing activities, savings and energy efficiency solutions were introduced, which primarily concern the low traffic periods for the 2G, 3G and 4G access layers. The energy consumption recorded for the site, dependent on the access technology and coverage conditions, showed a reduction of up to 10%. According to TIM Participações, the large-scale introduction of IoT could drastically change the mobile market in that it exploits the creation of services and represents a potential tool for agricultural applications, connected vehicles, tracking solutions, and social and healthcare support. In 2017 TIM invested in TIM Lab and in the E2E sector, improving existing smart parking applications and activating the connection of new applications, preparing the terrain for future NB-IoT and LTE-M commercial networks, which were launched in 2018 in the city of Santa Rita do Sapucai.

9 Entidade Administradora de Processo de Redistribuição e Digitalização de Canais de TV e RTV

10 SMI: IP Multimedia Subsystem, solutions focused on functional tests, specific analyses and interoperability with the so-called "legacy system"

Since 2018, TIM Participações together with Nokia and BR Digital, has offered connectivity services in rural areas, not only enabling agrobusiness commercial applications, but also the digital inclusion of sector employees and residents in small towns.

Open Lab initiatives

In 2017 TIM Participações joined the Telecom Infra Project (TIP), an initiative founded by Facebook, SK Telecom, Deutsche Telekom, Nokia, Intel and other companies, which aims to identify new approaches to the creation and deployment of telecommunications network infrastructure. TIM Participações has transformed TIM Lab into the first TIP Community Lab in Latin America, which will be used by TIP members to create universal standards relating to solutions, initially for transport networks, in order to overcome the challenges linked to the interoperability of the different providers. This initiative represents an open and collaborative approach to the development and testing of new technologies and solutions.

In October 2018, TIM joined up with a new work team in the Telecom Infra Project (TIP) together with Vodafone and other mobile operators, called DCSG (Disaggregated Cell Site Gateway). This project is an opportunity to define a common set of requirements to produce devices that are more open, flexible and cost-effective.

5.5 CAUTIONARY STATEMENT FOR PURPOSES OF THE "SAFE HARBOR" PROVISIONS OF THE UNITED STATES PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for forward-looking statements. The foregoing discussion in "Item 5—Operating and Financial Review and Prospects" and the following discussion under "Item 11—Quantitative and Qualitative Disclosures About Market Risks" contain forward looking statements.

Forward-looking statements are statements that are not historical facts and can be identified by the use of forward-looking terminology such as "believes," "may," "is expected to," "will," "will continue," "should," "seeks" or "anticipates" or similar expressions or the negative thereof or other comparable terminology, or by the forward-looking nature of discussions of strategy, plans or intentions.

Actual results may differ materially from those projected or implied in the forward-looking statements. Such forward-looking information is based on certain key assumptions which we believe to be reasonable but forward-looking information by its nature involves risks and uncertainties, which are outside our control, that could significantly affect expected results.

The following important factors could cause actual results to differ materially from those projected or implied in any forward-looking statements:

- our ability to successfully implement our strategy in the future;
- a deterioration of the economic environment in the principal markets in which we operate, including, in particular, our core Italian market;
- the impact of regulatory decisions and changes in the regulatory environment in Italy, Brazil and other countries in which we operate, including the ability of the Italian Government to exercise its power with respect to our ability to enter into strategic transactions;
- our ability to successfully compete on both price and innovation capabilities with respect to new products and services;
- our ability to develop and introduce new technologies that are attractive in our principal markets, to manage innovation, to supply value added services and to increase the use of our fixed and mobile networks;
- our ability to successfully implement our internet and broadband/ultrabroadband strategy;
- our ability to successfully achieve our financial targets (including debt reduction);
- the impact of fluctuations in currency exchange and interest rates and the performance of the equity markets in general;
- the outcome of litigation, disputes and investigations in which we are involved or may become involved;
- our ability to build up our business in adjacent markets and in international markets (particularly in Brazil), due to our specialist and technical resources;
- our ability to achieve the expected return on the investments and capital expenditures we have made and continue to make in Italy, Brazil and other countries in which we operate;
- the amount and timing of any future impairment charges for our authorizations, goodwill or other assets;
- our ability to manage any business or operating model transformation plans;
- disruptions or uncertainties resulting from the United Kingdom's expected exit from the European Union;
- any difficulties which we may encounter in our supply and procurement processes, including as a result of the insolvency or financial weaknesses of our suppliers; and
- the costs we may incur due to unexpected events, in particular where our insurance is not sufficient to cover such costs.

The foregoing factors should not be construed as exhaustive. Due to such uncertainties and risks, readers are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date hereof. We undertake no obligation to release publicly the result of any revisions to these forward-looking statements which may be made to reflect events or circumstances after the date hereof, including, without limitation, changes in our business or acquisition strategy or planned capital expenditures, or to reflect the occurrence of unanticipated events.

Item 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

6.1 DIRECTORS

A full renewal of the Board of Directors took place on May 4, 2018, following the majority of the Board members resigning from office, namely:

– on March 22, 2018, the Executive Deputy Chair resigned, effective as of the same day;

– the Executive Chair and Directors Camilla Antonini, Frédéric Crépin, Felicité Herzog, Marella Moretti, Hervé Philippe and Anna Jones resigned, effective as of April 24, prior to the beginning of the AGM which took place on the same day.

This triggered the entire Board ceasing to hold office as of April 24, 2018, which resulted in a separate, additional shareholders' meeting convened, taking place on May 4, 2018,

On April 24, 2018, Director Amos Genish (who had been co-opted following the resignation of Flavio Cattaneo in 2017 and at the time was the Company's CEO) ceased from office as well. The ordinary Shareholders' Meeting immediately reappointed him.

On May 4, 2018, the Shareholders' Meeting of the Company elected the Board of Directors of TIM presently in office, whose term of office is until approval of the 2020 annual financial statements.

The May 4, 2018 Shareholders' Meeting established the number of Directors at 15 and set the overall annual remuneration for the Board of Directors at 2,200,000 euros (to be divided among the members thereof in accordance with the resolutions to be adopted by the Board itself).

On May 7, 2018, the Board of Directors appointed Fulvio Conti as Chairman of the Company's Board of Directors and Amos Genish as Chief Executive Officer of the Company.

On November 13, 2018, the Board of Directors resolved by majority vote to revoke all the powers already conferred on Director Amos Genish.

On November 18, 2018, the Board of Directors to appointed Director Luigi Gubitosi as the new Chief Executive Officer and General Manager.

As of April 8, 2019, the Board of Directors of TIM was composed of the following directors:

Name	Age	Position	Appointed
Fulvio Conti(1)	71	Chairman/Director	2018
Luigi Gubitosi(2)	57	Chief Executive Officer/Director/General Manager	2018
Alfredo Altavilla(1)	55	Director	2018
Paola Bonomo(1)	49	Director	2018
Giuseppina Capaldo(1)	49	Director	2018
Maria Elena Cappello(1)	50	Director	2018
Massimo Ferrari(1)	57	Director	2018
Amos Genish	58	Director	2018
Paola Giannotti(1)	56	Director	2018
Marella Moretti(1)	53	Director	2018
Lucia Morselli(1)	62	Director	2018
Dante Roscini(1)	60	Director	2018
Arnaud Roy de Puyfontaine	55	Director	2018
Rocco Sabelli(1)	64	Director	2018
Michele Valensise(1)	67	Director	2018

(1) Independent Director according to legal requirements. For details on the criteria applied to determine independence, see "Item 10. Additional Information—10.1 Corporate Governance".

(2) He was appointed as Chief Executive Officer/General Manager starting from November 18, 2018.

(3) On November 13, 2018, the Board of Director revoked all the powers already conferred to Director Amos Genish, who therefore ceased in his role as CEO.

On April 8, 2019, the Secretary of the Board of Directors was the General Counsel of TIM, Agostino Nuzzolo.

In 2018:

- the Board of Directors met 21 times, with meetings generally scheduled pursuant to a calendar set forth in advance;
- the Control and Risk Committee, which as of April 8, 2019 was composed of Paola Giannotti (Chairwoman), Massimo Ferrari, Marella Moretti, Lucia Morselli and Michele Valensise, held 21 meetings. Where deemed desirable in light of the issues on the agenda, the Committee and the Board of Auditors held joint meetings;
- the Nomination and Remuneration Committee, which as of April 8, 2019 was composed of Alfredo Altavilla (Chairman), Paola Bonomo, Giuseppina Capaldo, Rocco Sabelli and Michele Valensise, met 14 times;
- the Strategic Committee which as of April 8, 2019, was composed of Fulvio Conti (Chairman), Luigi Gubitosi (CEO), Massimo Ferrari, Arnaud Roy de Puyfontaine and Rocco Sabelli, met 4 times; and
- the Related Parties Committee, which as of April 8, 2019 was composed of Lucia Morselli (Chairwoman), Giuseppina Capaldo, Maria Elena Cappello, Marella Moretti and Dante Roscini, met 9 times.

For a detailed description of TIM's corporate governance, including activities, responsibilities and organization of the Board of Directors and the Committees, see "Item 10 Additional Information—10.1. Corporate Governance".

* * *

6.1.1 Biographical Data

The following are the selected biographical data of the Directors as of April 8, 2019.

Fulvio Conti: Mr. Conti was born in Rome, Italy in 1947. Since May 2018 he has served as Chairman of Telecom Italia. A graduate of La Sapienza University of Rome with a degree in Economics, he also currently serves as sole Director of FAS Partners S.r.l., a financial strategic investor and advisor. He is a promoter and board director of the Fondo Efficienza Energetica SGR S.p.A., and serves as Chairman of SGI (Società Gasdotti Italiani). He was Chairman of Innova Italy.1, a SPAC listed company, until its merger with Fine Foods & Pharmaceuticals N.T.M, where he is now member of the Board of Directors. Since 2014 he has served as Senior Advisor of the investment fund MIRA (Macquarie Infrastructure and Real Assets), Europe Ltd. He was Chief Executive Officer and General Manager of Enel from 2005 to 2014. He joined Enel in 1999 as Chief Financial Officer and led the most important financial transactions of the Group at the time, such as the IPO of Enel, Terna and Enel Green Power, and Enel 2 and Enel 3 Global Offerings. As CEO he led Enel's international expansion. He finalized the successful takeovers of Endesa SA, the leading power company in Iberia and South America, of the genco OGK-5, the first company's acquisition made in Russia from a foreign group, and of Slovenské elektráne, the Slovak power utility. He also finalized the formation and further listing of Enel Green Power. He held the position of President of Eurelectric from 2011 to 2013. He has broad international experience having worked in several industries for major international companies in Belgium, United Kingdom and USA. He started his career in 1969 with Mobil Oil. In 1989 he was appointed Financial Director at Mobil Oil UK, in London, after holding different positions in oil, chemical and plastic sectors. In 1991 he held the position of Chief of Administration, Finance and Control of Campbell's in London and Brussels. In the same year, he moved to Montecatini, as Chief Financial Officer and in 1993 he was promoted to the role of Finance Director of the Holding Montedison-Compart, where he actively participated to the plan of restructuring Ferruzzi Group. In 1996 he was General Manager and Chief Financial Officer of Ferrovie dello Stato, with important responsibilities in subsidiaries of the Group such as Metropolis (Real Estate) and Grandi Stazioni. In 1997 he was appointed Vice-President of Eurofima. In 1998 he joined Telecom Italia S.p.A. as General Manager and board director in TIM, Finsiel, Sirti, Italtel, Meie, STET International and other subsidiaries, which positions he kept until 1999. He sits in the boards of directors of the Italian Technology Institute, AON Plc UK and USA, Unidad Editorial Spain, RBC PJSC Russia. He also served as member of the board of directors of Barclays, RCS Media Group and the Academy of Santa Cecilia. He was deputy chairman of Confindustria overseeing the Economic Research Department between 2012 and 2014. He was a lecturer of Corporate Finance at the MBA, School of Economics of the LUISS University, Rome. In 2007 he was awarded with the Doctor Honoris Causa degree in Electrical Engineering, from Genoa University. In 2009 he was appointed "Cavaliere del Lavoro" of the Italian Republic and "Officier de la Légion d'Honneur" of the French Republic.

Luigi Gubitosi: Mr. Gubitosi was born in Naples, Italy in 1961. Luigi Gubitosi studied at the London School of Economics and obtained a Law degree at Naples University and a Master in Business Administration at I.N.S.E.A.D. Fontainbleau (France). He has been Vice Chairman of Confindustria Servizi Innovativi e Tecnologici (CSIT) and of Asstel and a member of the Tax and Corporate Governance Committee of Confindustria. He was member of Chess Olympiad Torino 2006 Organising Committee and member of the Board of Directors of Cometa (Pension Fund of metal workers), F2i Sgr and Maire Tecnimont. From 1986 to 2005 he held several offices within the Fiat Group: Chief Financial Officer, Administration Director and Group Treasurer; he has been Chairman of the Board of Directors of Fiat Partecipazioni and member of the Board of Directors of Fiat Auto, Ferrari, Iveco, Itedi, Comau and Magneti Marelli. In 2005 he joined Wind Telecomunicazioni as Chief Financial Officer, and was CEO from 2007 to 2011. From November 2011 to July 2012 he was Country Manager and Head of Corporate and Investment Banking of Bank of America Merrill Lynch Italy. From July 2012 to August 2015 he has been General Manager of RAI. He has been Chairman of the European Advocacy Committee of the CFA Institute and Independent Director of TIM S.p.A. from May to November 2018. From May 2, 2017 to November 20, 2018 Mr. Gubitosi was coordinator of the government appointed commission of company Alitalia—Società Aerea Italiana S.p.A. under extraordinary administration.

In November 2018 he was appointed Chief Executive Officer and General Manager of Telecom Italia.

Alfredo Altavilla: Mr. Altavilla was born in Taranto, Italy in 1963. He holds a degree in Economics from Università Cattolica, Milan where he began his career as an assistant. He was Chief Operating Officer Europe, Africa and Middle East (EMEA) from November 12, 2012 to August 2018 at FCA N.V. He has also been a member of the Group Executive Council (GEC) and Head of Business Development since September 1, 2011. In 1990, he joined Fiat Auto, where he initially focused on international ventures in the area of strategic planning and product development. In 1995, he was appointed head of Fiat Auto's Beijing office and in 1999 head of Asian Operations. He has been involved in Business Development since 2001, responsible for coordination of the alliance with General Motors in 2002 and, in 2004, was assigned responsibility for management of all alliances. In September 2004, Mr. Altavilla was appointed Chairman of FGP (Fiat/GM Powertrain JV) and Senior Vice President of Business Development of Fiat Auto. In July 2005, he became CEO of Türk Otomobil Fabrikasil A.S. (TOFAS)—a 50-50 joint venture between Fiat Auto and Koç Holding listed on the Istanbul stock exchange—while retaining his role as head of Business Development. In November 2006, he was named Chief Executive Officer of FPT—Fiat Powertrain Technologies. In July 2009, he became a member of the Board of Directors of Chrysler Group LLC and in October 2009 was named Executive Vice President of Business Development for Fiat Group. From November 2010 to November 2012 he was President and Chief Executive Officer of Iveco. He was also a member of the Fiat Industrial Executive Council (FIEC) from January 2011 to November 2012. He is Board Member of Actuant Corp.and Tim S.p.A.

Paola Bonomo: Ms. Bonomo was born in Marostica (Vicenza), Italy in 1969. She started her career at McKinsey & Company, where she was an advisor to top management teams at leading international companies on strategic positioning, growth, new markets, alliances and acquisitions. She then worked in leadership roles such as Senior Director, European Operations at eBay International; Head of Online Services, Commercial Operations at Vodafone Italia; and Regional Director, Southern Europe at Facebook. Since 2009 she has invested in technology startups with Italian Angels for Growth, where she focuses on investments in the digital space. In 2015 and in 2016, she was recognized as one of the Inspiring Fifty, the fifty most inspiring women in European Technology. In 2017, she was awarded the Business Angel of the year award in Italy and the Golden Aurora award for the best woman business angel in Europe. She serves on the Boards of Directors at AXA Assicurazioni S.p.A., Piquadro S.p.A., Sisal Group S.p.A., Stefanel S.p.A. and FAAC S.p.A.. She is also the President of Stanford Club Italia, the local Stanford University alumni chapter. Ms Bonomo holds an undergraduate degree in Business Administration from Bocconi University in Milan and an MBA from the Stanford Graduate School of Business.

Giuseppina Capaldo: Ms. Capaldo was born in Rome, Italy in 1969. She achieved a degree in Economics and a degree in Law from "La Sapienza" University of Rome, has been a licensed certified public accountant since 1992 and has been listed in the Register of Independent Auditors (since 1999). In addition, Ms. Capaldo has been qualified to practice law in Italy since 2003. Mrs. Capaldo is Full Professor of Private Law at "La Sapienza" University of Rome and she has been Deputy Rector for Resource Planning and Assets (since 2014). She currently serves as Independent Director of Salini Impregilo (2012-present); Ferrari N.V. (2015-present) and TIM S.p.A. (2018-present). She served as Independent Director of the Board of Exor S.p.A. from 2012 to 2015; Credito

Fondiario S.p.A. (2014-2017); Banca Monte dei Paschi S.p.A. (December 2017-April 2018). She was a member of the Board of Directors of Ariscom S.p.A. from 2012 to 2015 and A.D.I.R.- Assicurazioni di Roma (2006-2010). She collaborated with the Macchi di Cellere Gangemi law firm in the Banking and Finance, Corporate and M&A sectors (2004-2007). She served, at "La Sapienza" University, as Deputy Rector for Strategic Planning (2008-2014); Head of Department of "Law and Business (D.E.A.P.)" (2007-2013); Director of PhD "Contract Law and Business" (2007-2011); and Director of LLM "Financial Markets Law" (2009-2014). She authored several publications in the areas of contract law, insurance law, financial law and market legal theory.

Maria Elena Cappello: Ms. Cappello was born in Milano, Italy in 1968. She graduated in Engineering at the University of Pavia. In 1995, she completed an Executive Master's Degree in Strategic Marketing and Sales Techniques at Babson College, MA (USA) and in 1998 she obtained an Executive Master's Degree in Marketing Management from SDA Bocconi in Milan. In 1991, she joined Italtel S.p.A. as System Consultant in the Business Unit Switching OSS and in 1994 moved to Emc Italia S.p.A., where she was later appointed Manager of the Public Administration Division and Telecom Division. In 1998, she joined Compaq Computers (later Hewlett Packard) in Munich (Germany), where she served as EMEA Storage Division Marketing Manager, EMEAS Storage Division Business Development Manager EMEA, Global Services Executive Director and EMEA Service Provider Group Executive Director. In 2002, she founded and developed the Milan-based European branch of MetiLinx Inc., an innovative U.S. software company. She was also a member of the Executive Committee of MetiLinx Inc. in San Mateo CA (USA) and was appointed its Chief Executive Officer for UK, Germany and Italy. In 2005, she took on the role of Senior Vice President of Sales in Pirelli Broadband Solutions S.p.A. In 2007, she joined Nokia Siemens Networks (now Nokia), Milan and London offices, as Head of Global Strategic Marketing and from 2010 to 2013 she served as CEO, General Manager and Deputy Chairman of the Board of Directors of Nokia Siemens Networks Italia S.p.A. and Nokia Siemens Networks S.p.A. (real estate company). Since 2012 she has been an independent Director of Prysmian S.p.A. Since 2015 she has been independent Director of Saipem S.p.A. and Banca Monte dei Paschi di Siena. She was independent Director of SACE S.p.A. until June 2014 and served on the Management Board of A2A S.p.A. where she was also member of the Board of Directors until 2017. From 2015 to 2018 she has been independent Director of Seat Pagine Gialle S.p.A. and Italia online S.p.A. She is also amember of the Board of Directors of Fondazione ENI Enrico Mattei. She is member of Fortune's World's Most Powerful Women, Women Corporate Directors and of World Economic Forum for the Climate Change Chapter.

Massimo Ferrari: Mr. Ferrari was born in Rome, Italy in 1961. He holds a Degree in Economics and Business Administration from the LUISS Guido Carli University of Rome. He is currently General Manager Corporate & Finance Group CFO of Salini Impregilo S.p.A. and member of the Board of Directors of Lane Industries Inc. He is also Board Member of Tim S.p.A., Equita Group S.p.A. and Cairo Communication. He has a role as Professor at Luiss Guido Carli University in Rome. He spent more than 20 years in the Asset Management industry as portfolio manager, head of investments and CEO in various companies (Fondinvest, Gestifondi, Romagest, Capitalia Asset Management, Fineco Asset Management). He has also served as Head of Issuer Division of CONSOB (Italian Market Authority). Past appointments saw him Board Member of Borsa Italiana S.p.A. (Italian Stock Exchange), member of Assogestioni, Assosim and Assoreti.

Amos Genish: Mr. Genish was born in Hadera, Israel in 1960. He was Chief Executive Officer and General Manager of TIM from September 2017 to November 2018. From the beginning of 2017 through to July of the same year, he had the responsibility of Chief Convergence Officer in Vivendi. In this role he oversaw the convergence strategy between content, platforms and distribution. Until the end of 2016, Amos Genish was CEO of Telefonica Brasil / Vivo. During his tenure, Telefonica Brasil / Vivo outperformed the Brazilian telecom market in revenue and EBITDA growth, as well as in total shareholder return. In 2016, Mr Genish was ranked as Latin America's best CEO in the Technology, Media and Telecommunications industry by Institutional Investor. He joined Telefónica at the beginning of 2015, when it acquired GVT, an innovative and fast-growing telecom and Pay TV operator, of which he was CEO. After having co-founded GVT, he was its CEO starting from 1999, he led the successful bid for the "mirror" license of region 2 in Brazil. In 2007, Amos led GVT's IPO in the Brazilian stock exchange. In 2009, he led the company's sale to Vivendi (from 2011 to 2013, he was part of Vivendi's Management Board). In 2014, he led the negotiations of GVT's sale to Telefónica (7.45 € billions deal). Prior to this, he was CEO of GVT rural telecom operation, where he managed the initial fund raising to start the activities of the company and support the launch of services in Chile, Peru and Colombia. From 1989 Amos joined as CFO the start-up Edunetics Ltd., which developed comprehensive curriculum multimedia-based systems mostly for the US school market. In 1992 he led jointly with the CEO the IPO of the company on Nasdaq. In 1995 he was

appointed CEO of it. From 1986 to 1989 Amos worked in one of the largest accounting firm in Israel (KMPG Israel as of today), where he was involved in the audit and tax work of large holding companies. Recently, from the beginning of 2017 to July 2017, he held the position of Chief Convergence Officer in Vivendi. In this role, Mr Genish oversaw the Group's convergence strategy between content, platforms and distribution. He is a member of the Board of Representatives of Vevo—the leading international music video hosting company co-owned by Universal Music Group, Sony Music Entertainment, Google and Abu Dhabi Media Company—and member also of the Board of Itaù Unibanco Holding Sa, the largest Brazilian publicly listed bank. He holds a B.A. in Economics and Accounting from Tel Aviv University.

Paola Giannotti: Ms. Giannotti was born in Alessandria, Italy in 1962. She has a degree cum laude in Political Economics from the Bocconi University of Milan. She attended some semesters at Universität zu Köln (Colonia, Germania) and New York University. She is a Board member of Terna S.p.A., Ubi Banca S.p.A., ICF Group S.p.a., EPS Equita PEP SPAC 2 S.p.A. and TIM S.p.A. At TIM and Ubi Banca she is Chair of the Risk Committee. She has held various managerial roles throughout her thirty years of international experience in the financial sector, in the corporate and investment banking area, working in corporate finance as well as in the capital markets, extraordinary-operations and project-financing sectors. Through the years she held various operational and management positions in New York, London, Milan, Frankfurt and Paris in leading international companies such as Morgan Stanley, Citigroup, Dresdner Bank e BNP Paribas where she developed the strategic Italian customer base (MEF, Telecom Italia, Eni, Enel, Terna, Ferrovie, Finmeccanica). She has been Director on the Board of Ansaldo STS S.p.A. and Dresdner Kleinwort Wasserstein SGR. In 2002 she was recognized with the Belllisario Foundation Award as Manager of the Year. From 2000 to 2012 she was member of the Council for the United States and Italy under the honorary chairmanship of David Rockfeller.

Marella Moretti: Ms. Moretti was born in Torino, Italy in 1965. She is a graduate of the "Amministrazione Aziendale" Business School of the University of Turin, where she specialized in Finance. She started her career in 1988 as International Corporate Finance Analyst at Fiat SpA in Italy. From 1991 to 1996, she worked as head of Financial Planning and Control at Fiat France, in Paris. Ms. Moretti then went on to hold several successive positions at Fiat France: Head of Corporate Finance (1996-1998); Deputy Chief Financial Officer (1998- 1999) and Chief Financial Officer (2000-2005). Since 2005, she has been Chief Financial Officer of Fiat Chrysler Finance et Services in Paris. She also currently holds other positions within the Fiat Chrysler Automobiles and CNH Industrial groups in France. Since 2009, she has been Managing Director (Directeur General delegué) and Board member of CNH Industrial Financial Services, the captive finance company for CNH Industrial in Europe region, regulated by the French Central Bank Authority ACPR. Since 2011, she has been Chief Executive Officer and Board member of CNH Industrial Finance France and she has served as a member of the Board of Directors of Fiat Chrysler Finance Europe. From 2011 to 2014, she also served as an independent member of the Supervisory Board and of the Audit Committee of Unibail-Rodamco, Europe's leading commercial property company, listed on the Paris Stock Exchange. She is a member of MEDEF Europe commission (French employers' confederation), of the NGO Care France and of the Women Corporate Directors organization (international chapter). Since 2017 she has been a Director of Telecom Italia S.p.A.

Lucia Morselli: Ms. Morselli was born in Modena, Italy in 1956. She graduated with the highest grades in Mathematics at the University of Pisa. She completed a PhD in Mathematical Physics at the University of Rome and she holds two master degrees, one in Business Administration at the University of Torino and the other in In European Public Administration at the University of Milan. She started her career at Olivetti S.p.A. as collaborator of the CFO in 1982; from 1985 to 1990 she was a Senior Manager of the Strategic and Manufacturing Service at Accenture; from 1990 to 1995 she was the CFO of the Aircraft Division Department at Finmeccanica S.p.A. Subsequently she was the Chief Executive Officer of Telepiu' Group (1995-1998), of News Corporate Europe and Stream (Sky) S.p.A (1998-2003), of Tecnosistemi S.p.A (2004), of Mikado S.p.A. and Compagnia Finanziaria S.p.A., (2009), of Bioera S.p.A (2010-2011), of Berco Group (2013-2014) and of Acciai Speciali Terni (2014-2016). She also served as Chair of the Board and Chief Executive Officer of Scorpio Shipping Group Ltd.and also Member of the Board of Directors of NDS and IPI S.p.A.. She has been Deputy Chairman of Ital Brokers S.p.A. Ms. Morselli is Member of the Board of Snam S.p.A., Fondazione Snam, Sisal Spa, TIM S.p.A. and EssilorLuxottica (Paris). She Is CEO of Acciaitalia S.p.A. and Member of World Economic Forum for the Climate Change Chapter, Head of the Economy Department of Unilink Campus University (Roma) and member of the Advisory Board of Veneranda Fabbrica del Duomo di Milano. In 2003 she founded the consultancy firm Franco Tatò & Partner.

Dante Roscini: Mr. Roscini was born in Perugia, Italy in 1958. He was educated in Switzerland and France where he received a baccalauréat in mathematics and physics. He then studied Nuclear Engineering at the University of Rome La Sapienza from which he graduated with honors and subsequently received a Master in Business Administration from Harvard. Prior to getting his MBA, he worked for five years as an engineer and a project manager at Nucleare Italiana Reattori Avanzati (Ansaldo Group) in Genova and Westinghouse Electric Corporation in Pittsburgh. Since 2008 he has been a member of the Faculty of Harvard Business School in the "Business, Government and the International Economy" department. In 2011, Harvard awarded him the L.E. Simmons Fellowship. Before his academic career, he held for twenty years senior positions at three leading US investment banks. In such roles, he assisted companies and governments in numerous countries and sectors in planning and executing financial transactions such as capital increases, privatizations, initial public offerings, global equity and fixed income offerings and mergers and acquisitions. He was the first Italian Associate hired by Goldman Sachs where he worked in New York and London from 1988 to 1999. Promoted to Managing Director in 1996 he ran the European Capital Markets Division. In 1999, Merrill Lynch offered him the role of Head of the Global Capital Markets Division and of the Financing Group. In 2005, he accepted the position of Chairman of Capital Markets of Morgan Stanley, CEO of Italy, and board member of Morgan Stanley International Bank. He is currently Chairman of Credimi, an Italian FinTech startup; Board member and Chairman of the Remuneration Committee of Kairos, a Julius Baer Group company and President of the advisory board of IDeA Corporate Credit Recovery fund. He is a member of the Scientific committee of the Centro Studi Confindustria; International advisory board of Akbank and the strategic committee of Nevastar Finance; American Economic Association; National Association of Business Economics; Minda de Gunzburg Center for European Studies at Harvard; Strategic advisory board of the BIDMC Hospital Cancer Center. He has been a board member of SACE and of Promethean Group Ltd, a company formerly listed on the London Stock Exchange for which he was Chairman of the Remuneration Committee.

Arnaud Roy de Puyfontaine: Mr. Roy de Puyfontaine was born in Parigi, Italy in 1964. He is a graduate of the ESCP (1988), the Multimedia Institute (1992) and Harvard Business School (2000). He has been, since December 15, 2015, a member of the Board of Directors of Telecom Italia. In 1989, he started his career as a consultant at Arthur Andersen and then worked as a project manager at Rhône-Poulenc Pharma in Indonesia. In 1990, he joined Figaro as Executive Director. In 1995, as a member of the founding team of the Emap Group in France, he headed Télé Poche and Studio Magazine, managed the acquisition of Télé Star and Télé Star Jeux, and started up the Emap Star Division, before becoming Chief Executive Officer of Emap France in 1998. In 1999, he was appointed Chairman and Chief Executive Officer of Emap France, and, in 2000, joined the Executive Board of Emap Plc. He has led several M&A deals, and from 2000 to 2005, served as Chairman of EMW, the Emap/Wanadoo digital subsidiary. In August 2006, he was appointed Chairman and Chief Executive Officer of Editions Mondadori France. In June 2007, he became General Head of all digital business for the Mondadori Group. In April 2009, he joined the US HEARST media group as Chief Executive Officer of its UK subsidiary, Hearst UK. In 2011, on behalf of the Hearst Group, he led the acquisition of 102 magazines from the Lagardère Group published abroad, and, in June 2011, was appointed Executive Vice President of Hearst Magazines International. In May 2012 he joined the Board of Directors of Schibsted. Then, in August 2013, he was appointed Managing Director of Western Europe. He was Chairman of ESCP Europe Alumni. From January to June 2014, he was a member of Vivendi's Management Board and Senior Executive Vice President in charge of its media and content operations. Since June 24, 2014, he has been CEO and Chairman of the Management Board of Vivendi. He was appointed Deputy Chairman (2016) and Executive Chairman of TIM from June 2017 to May 2018. He currently helds the following positions within the Vivendi group: CEO and Chairman of the Management Board of Vivendi; Chairman of the Supervisory Board of Universal Music France; Member of the Supervisory Board of Canal+Group; permanent representative of Vivendi on the Supervisory Board of Banijay Group and Director of Havas. His other positions and functions include: Member of the Advisory Committee of Innit and Honorary Chairman of the French-American Foundation.

Rocco Sabelli: Mr. Sabelli was born in Agnone (Isernia), Italy in 1964. He graduated in Chemical Engineering. From 1981 to 1983 he served as Assistant to the Production Manager in an agri-food company. From 1983 to 1985 he joined GEPI (now Invitalia) as Junior Analist (company check-ups, Business Planning, Dealing) where he dealt with Mergers and Acquisitions in industrial and employment crisis areas (sale of assets or company branch/badwill, for new business initiatives). From 1985 to 1992 he held various positions within Eni Group. From 1993 to 2001 he joined Telecom Italia Group. He was Head of Planning & Control Department of Regione Lazio and of the Central Department of Information Technology; Controller Deputy General Manager (Administration, Finance and

Control—Purchasing and management of the goods and—Network—Information Technology) in Telecom Italia Mobile. He served as General Manager Wireline Services Fixed Network Services and Internet for the Italian market (Corporate customers, Small and medium enterprises, domestic customers); Public Telephony services and Directories; Wholesale services for the international market (phone traffic, Broadband and data service with companies as Mediterranean Nautilus, Latin America Nautilus, etc,); Staff Functions (Purchasing, HR, Administration and Control); and Accountability on P&L and Capital allocation. In 2002 he was one of the founding partners of Omniainvest, holding of industrial investments where he has been appointed Chief Executive Officer. In 2003 he served as Chief Executive Officer of Immsi S.p.A. (acquisition of Piaggio, Cantieri Navali Rodriguez), an industrial holding and real estate Company listed on the Milan Stock Exchange. From 2003 to 2006 he acted as Chief Executive Officer of Piaggio S.p.A. From 2006 to 2008 he took over Data Service (about 18% together with Tamburi Investment Partner and, afterwards Intesa San Paolo) becoming Chairman of the Company (now BE S.p.A.), one of the major Italian players of the technological and operational outsourcing market (banks, insurance companies, service companies, public and private) listed on the Milan Stock Exchange. From 2008 to 2012 he took part in the privatization process of Alitalia (extraordinary administration). Subsequently he was appointed Chief Executive Officer and General Manager for the implementation of the Industrial Plan. From 2012 he served as Operating Partner of private equity funds (Clessidra, NUO Capital and 4R).

Michele Valensise: Mr. Valensise was born in Polistena (Reggio Calabria), Italy in 1952. Ambassador Michele Valensise holds a degree in Law at Università "La Sapienza" in Roma. He joined the diplomatic service in 1975. After various assignments at the Ministry of Foreign Affairs and abroad (Brazil, Germany, Lebanon, European Union), he was appointed Head of the Press Service, Spokesman and Chief of Staff of the Minister of Foreign Affairs. He was assigned as Italian Ambassador to Sarajevo, Brasilia and Berlin. From 2012 to 2016 he was Secretary-General of the Farnesina. Currently he is Vice Chairman of Astaldi S.p.A., leading company of the infrastructure sector. Since 2017 he has also been Chairman of the German-Italian Center for European Excellence. He is an editorialist of the Italian newspaper "La Stampa".

None of the Directors has a service contract.

6.2 EXECUTIVE OFFICERS

As of April 8, 2019 the executive officers of TIM and their respective positions were as follows:

Name	Age	Position	Appointed
Directors:			
Luigi Gubitosi(1)	57	Chief Executive Officer/General Manager	2018
Managers:			
Lorenzo Forina(2)	46	Chief Revenue Office	2018
Pietro Labriola(3)	51	CEO Tim Participacoes	2019
Carlo Nardello(4)	55	Chief Strategic Customer Experience & Transformation Office	2019
Agostino Nuzzolo	51	Head of Legal and Tax	2018
Piergiorgio Peluso	51	Chief Financial Officer and Head of Administration Finance and Control	2012
Federico Rigoni(5)	52	Procurement Unit & Real Estate	2019
Elisabetta Romano(6)	56	Chief Technology & Innovation Office	2018
Luciano Sale(7)	58	Human Resources & Organizational Development	2019
Stefano Siragusa(8)	43	Chief Wholesale Infrastructures Network & Systems Office	2018

(1) Since November 18, 2018.

(2) Since January 18, 2019 he has been Chief Revenue Office of TIM.

(3) Since April 3, 2019.

(4) Since February 20, 2019.

(5) Since April 1, 2019.

(6) Since July 1, 2018.

(7) Since February 5, 2019.

(8) Since March 12, 2018 he was appointed Chief Infrastructures Office & Transformation Office subsequently renamed Chief Wholesale Infrastructures Network & System Office.

Lorenzo Forina: Mr. Forina was born in Genoa, on 1973. Starting from 18 January 2019 he was appointed Head of the Chief Revenue Office. From 24 September 2018 until January 2019 he was Head of Business & Top Clients Office. Mr. Forina graduated in mechanical engineering at the University of Genoa with honors. Mr. Forina received a master's degree in Business Administration from INSEAD (Campus Europa) in Fontainebleau, France. From 1997 to 1998 he was a technical engineer for D'Appolonia. From January to April 1998 he was a Value Partner consultant in Milan. From April 1998 to March 2013 he was a partner of McKinsey and Company. From April 2013 until July 2016, Forina was Chief Marketing Officer of the Consumer division of TIM. Since July 2016 to September 2018, Mr. Forina has been Domestic Business Division Director of TIM.

Pietro Labriola: Mr. Labriola was born in Altamura (Bari), Italy on October 1, 1967. From 1993 to 1994 he worked at France Telecom Italia, in Milan, where he was appointed Assistant to the Managing Director. In 1995 he worked at Cable & Wireless Italia as Marketing Director. In 1996 he worked at Infostrada S.p.A as Director of Business Development. In 1997 he worked as a consultant for Boston Consulting Group in Italy. In 1998 he was appointed Marketing Director of Infostrada S.p.A. In 2001 he started working for Telecom Italia Group, holding management positions of increasing responsibility, beginning as Voice Marketing Director with the launch of ADSL ALICE Offer, among others. In 2005 he was appointed Marketing Director for Fixed & Mobile Services. Keeping his managerial responsibility, in 2006 he became CEO of Matrix. In 2007 Mr. Labriola was appointed Head of Domestic Fixed Services and in 2009 he took the role of Head of Business Unit for fixed, mobile and ICT services, launching Impresa Semplice. In 2013 he took the responsibility of coordinating the network spin-off project and in 2014 he became Head of Business Transformation & Quality. In 2015 he was appointed Chief Operating Officer at TIM PArticipacoes S.A., a position he held until October 2018.

Carlo Nardello: Mr. Nardello is an Italian citizen, born in Rome, Italy, with a University Degree in Economics issued in 1988 by LUISS (Libera Università Internazionale degli Studi Sociali). Mr. Nardello has over 20 years of

experience in the industry of broadcasting and communications. On January 7, 2019, he was appointed Chief Strategic Development & Transformation Officer at Telecom Italia S.p.A.. Between November 2016 through 2018 he was co-founder and CEO of CscVision, a consulting firm in media and marketing, as well as, starting from May 2017, Chief of Staff of the Special Commissioners of Alitalia (Italy's national airline). From May 2000 through November 2016 he held various offices at RAI Group (Rai—Radiotelevisione Italiana S.p.A., Italy's public television and media company). Before that, he worked at Lego Company, The Walt Disney Company and Johnson and Johnson. Mr. Nardello is currently a Professor of Digital Marketing at La Sapienza University in Rome, Professor of Media Economics at LUMSA University in Rome, and he was also Professor of Marketing at UNISOB in Naples. He is the author of books on television marketing and in the digital market.

Agostino Nuzzolo: Mr. Nuzzolo was born in Caserta, Italy in 1968. He has been Head of TIM's Legal Affairs & Tax and General Counsel of TIM since January 2017, Secretary to the Board of Directors since February 2017 and interim Head of Human Resources and Organization since November 2017. Mr. Nuzzolo holds degree in Economics, cum laude, from the University of Bergamo, a law degree from the University of Milan and a graduate degree in Scienze della Sicurezza Economico-finanziaria from the University of Tor Vergata. In 2003, he obtained a Post-University Degree in Corporate Taxation, Scuola Polizia Tributaria Guardia di Finanza in cooperation with Bocconi University, Milan and admission to the bar (Italian Attorney).

From July 1986 until May 2006, he served as an officer cadet at the Military Academy of the Guardia di Finanza. During his career, he was in charge of managing and supervising daily activities and inspections in connection with combating tax and finance criminal activities as well as training of military cadets and other personnel in the Academy, assigned to both national and international units and operations. In his last appointment, he was served as Lieutenant Colonel, Head of Analysis and Studies within the Commanding General Office in Rome. He was also a member of the OECD commission (jointly Italy and US) in charge of verifying the effective implementation in Japan of the OECD Convention against Corruption (February-April 2006). From May 2006 to May 2008, he served as Tax Manager of Italcementi Group, directly reporting to the Administration & Control Director. From May 2008 to September 2014, he served as Legal, Tax and Compliance Director of Italcementi Group, directly reporting to the CEO. From February 2016 to June 2016, he held the office of HR, Organization and Information Technology Director (interim and in addition to the General Counsel position) of Italcementi Group, directly reporting to the CEO. From July 2016 to January 2017, Mr. Nuzzolo was General Counsel and Operational Director of Italmobiliare S.p.A., an investment holding company with the responsibility of coordinating all non-financial activities (legal, corporate affairs, tax, HR and general services). He also served as secretary to the Board. Mr. Nuzzolo was been an Adjunct Professor of International Taxation at the University of Bologna (School of Economics, Management and Statistics) from 2013 to 2016 and an adjunct professor in International Taxation at University of Roma Tre during the 2010-2011 academic year. Mr. Nuzzolo since April 2017 is member of the Board of Directors of INWIT.

Piergiorgio Peluso: Mr. Peluso was born in Rome, Italy in 1968. From September 26, 2012, he was Chief Financial Officer (CFO) and manager in charge of preparing corporate accounting documents of TIM S.p.A. From April 15, 2016 to December 17, 2017, he was Head of the Business Support Office of TIM S.p.A.. Since December 18, 2017, he has been Chief Transformation Officer (CTO) of TIM S.p.A. After graduating with a degree in Economics and Social Sciences at the Luigi Bocconi Commercial University in 1992, with a specialization in Finance, Peluso was an accountant at Arthur Andersen & Co until 1994. After a period at Mediobanca as Senior Financial Analyst between 1994 and 1998 and with Credit Suisse First Boston as Vice President of Financial Institutions Group from 1998 to 2000 and Mergers & Acquisitions Group (2000-2001), he became part of Medio Credito Centrale S.p.A. (Capitalia Group) in 2002 as Central Director. He held this position until 2005, when he was appointed Central Director of Capitalia S.p.A. From 2007 to 2009, following the merger of Capitalia S.p.A. and UniCredit Group S.p.A., he was Head of Investment Banking Italia at UniCredit Group S.p.A. appointed Chief Executive Officer of UniCredit Corporate Banking S.p.A. In 2010, following the merger of UniCredit Corporate Banking S.p.A. with UniCredit S.p.A., he was appointed Head of Corporate & Investment Banking Italia, UniCredit Group. From 2011 to September 2012 he was Chief Executive Officer of Fondiaria SAI S.p.A. Peluso was a Director of Banco di Sicilia S.p.A., Edison S.p.A., Gemina S.p.A., Aeroporti di Roma S.p.A. and Milano Assicurazioni S.p.A. He currently holds the office of Director of Inwit S.p.A., of Flash Fiber Srl, of Telenergia Srl where he also holds the position of Chairman of the Board of Directors.

Federico Rigoni: Since June 2017, Federico Rigoni has been Ericsson's Head of Business for the South East Mediterranean. At the same time, he has held the position of President and CEO of Ericsson Telecommunications,

as well as vice president of ASSTEL. Before these roles, he held a range of executive positions in sales at Ericsson. Mr. Rigoni has been working at Ericsson since 2010. Before this, he held a wide range of roles, both in sales and operations at Nokia Siemens Networks, Siemens Communications and ITALTEL. His previous position at Nokia Siemens Networks was Global Head of Sales for Telecom Italia Group, as well as CEO of Nokia Siemens Networks Italia. Rigoni is 52 years old and comes from Vicenza, Italy. He graduated in Electronic Telecommunications Engineering at the University of Padua. He has taken part in a wide range of executive courses at various universities, including Columbia University and the University of Pennsylvania.

Elisabetta Romano: Ms. Romano was born in Milan, Italy in 1963. Since July 1, 2018 she has been Chief Technology Officer of TIM. Ms. Romano has a Master of Computer Science of University of Salerno—Fisciano, Campania and Executive Program Leadership of Columbia University—New York, NY. She is an expert in technology in the telecommunications, IT and media sectors in Europe and the United States. She held various positions including EVP & GM, Packet Core & Identity Management Santa Clara, CA of Ericsson from June 2017 to June 2018. She was EVP & GM, Media Solutions at Ericsson from June 2016 to June 2017. She served as Vice President, Head of OSS & Service Enablement at Ericsson from June 2012 to June 2015. From March 2006 to December 2009 was Chair of Pride, a company belonging to the Ericsson group. In 2017 she was recognized as one of the top 50 women in technology by the National Diversity Council.

Luciano Sale: Mr. Sale was born in Macomer, Italy in 1961. Since February 5, 2019 he has become Chief of Human Resources & Organizational Development of TIM. He graduated in Sociology in Trento. After a brief experience as a researcher and training consultant, he started his professional career in January 1990 at Alenia Aerospazio, Aeronautics Division, as Training Manager of the Training activities. Between 1998 and 2001 he was at Wind Telecomunicazioni as Head of the Policies for the selection, management, development and training of the workforce. In 2001 he moved to IPSE2000 S.p.A. as Head of Human Resources Management and Development. In 2003 he returned to Wind as Vice President in charge of Personnel Management and Industrial Relations. After an experience as Human Resources Director at Poste Italiane, in June 2012 he was once again in Wind to take on the role of Vice President of Human Resources and Facilities Management. From December 2016 he was been the Human Resources Manager of the new Wind Tre Company, created as a result of the merger between Wind and Tre. He then was Alitalia's Human Resources Director from September 2017.

Stefano Siragusa: Mr. Siragusa was born in Feltre, Italy on 1976. His international managerial profile has allowed him to hold a series of leadership positions in multinational companies. In 2000, he joined Siemens AG as Product Manager in the Automation and Drives Division. In 2002, he began his career in BCG defining value-creation strategies in Europe, Asia-Pacific and particularly in North America where, as BCG Global talent, he transferred in 2005. Once back to Italy, in 2011 he was elected Partner & Managing Director of BCG and was appointed as leader of the industrial goods division. In 2012, he was also asked to coordinate Aerospace & Defence division in Europe and Middle East. In 2013, he was elected member of BCG's Global Operations Leadership Team and he decided to move to New York to be entrusted also with the responsibility of defining and coordinating BCG's global content agenda for Lean, Procurement and Supply Chain. In 2014, he returned to Italy to be nominated CEO and General Manager of Ansaldo STS, a public company listed on the Milan Stock Exchange (STS.IT) which delivers worldwide the most important mass transportation and urban railways projects. Under Siragusa's leadership, AnsaldoSTS experienced a superior value creation renaissance: new orders grew by 160%, cash generation by 90%, net results by 80% and productivity by 60%. Successfully finalized Ansaldo STS turnaround and its transition from Leonardo into Hitachi Group, in 2016 Siragusa decided to join Bain&Company, a global management-consulting firm with 55 offices in 36 countries, as Senior Partner and Director. Since 2017, Mr. Siragusa has been a Member of the Advisory Board of LUMSA University. In 2016 Mr. Siragusa has supported the successful IPO of Enav, the public listed company that provides Air Traffic Control services, as member of the Board of Directors, Chairman of the Remuneration and Nomination Committee and member of the Risk and Related party committee. In 2015 and 2016, Mr. Siragusa has been Member of the Board of Directors and Member of the Governance Committee of Saipem, global leader in the Engineering & Construction and Drilling businesses. In 2015 and 2016 Mr. Siragusa was, also, Chairman of the Board of Metro 5—new Metro Systems in Milan. From 2015 to 2016, Mr. Siragusa was a Member of the Board of Directors of Marangoni, a global leader in the tire industry. Mr. Siragusa, born in 1976, graduated summa cum laude with a degree in Electrical Engineering from Politecnico di Milano. He successfully completed his education by obtaining an MBA cum laude from MIP and an Executive Master from Harvard Business School.

* * *

In February 2016, the District Court of Milan issued an indictment against Mr. Piergiorgio Peluso and 11 other individuals in connection with an investigation stemming from the bankruptcy of Imco S.p.A. (**Imco**) in 2012. The principal allegation against Mr. Peluso is that, as CEO of UniCredit Corporate Banking S.p.A. (**UniCredit**) (the position he held before joining TIM in September 2012), he approved a complex restructuring transaction, which had, according to the allegation, the effect of decreasing the net asset value of Imco.

6.3 BOARD OF AUDITORS

On April 24, 2018, the Shareholders Meeting appointed the present Statutory Board of Auditors, that will remain in office until approval of the 2020 financial statements. Based on the slates submitted by the shareholders, five Acting auditors and four alternate Auditors have been appointed.

The Shareholders' Meeting also appointed Auditor Roberto Capone as Chairman of the Board of Statutory Auditors.

The following table lists the members of the Telecom Italia Board of Statutory Auditors as of April 8, 2019.

Name	Position	Appointed
Roberto CAPONE(1)	Chairman	2015
Giulia DE MARTINO	Acting Auditor	2018
Anna DORO(1)	Acting Auditor	2018
Marco FAZZINI	Acting Auditor	2018
Francesco SCHIAVONE PANNI	Acting Auditor	2018
Andrea BALELLI	Alternate Auditor	2018
Antonia COPPOLA	Alternate Auditor	2018
Franco DALLA SEGA(1)	Alternate Auditor	2018
Laura FIORDELISI(1)	Alternate Auditor	2018

(1) Elected by minority shareholders.

The positions held by the members of the Board of Statutory Auditors in other listed companies are shown below:

Marco Fazzini	Chairman of the Board of Auditors of ASTM S.p.A. and Poste Vita S.p.A.
Francesco Schiavone Panni	Chairman of the Board of Auditors of IMA S.p.A.
Giulia De Martino	Acting Auditor of Saipem S,p.A.

For a detailed description of TIM's corporate governance, including activities and responsibilities of the Board of Auditors (acting as Audit Committee of the Company) and the mechanics for its appointment, see "Item 10 Additional Information—10.1 Corporate Governance".

6.4 EXTERNAL AUDITORS

The TIM Shareholders' Meeting, held on March 29, 2019, appointed Ernst & Young as TIM's independent auditors for the nine-year period 2019-2027, after the nine-year period 2010-2018 when such position was held by PricewaterhouseCoopers S.p.A., the sole auditor of the entire TIM Group.

The audit of Italian issuers (Public Interest Entities) is governed by legislative decrees on statutory audits of annual and consolidated accounts and, starting from January 1, 2017, by a new European regulation. Pursuant to such decrees and regulation, with the audit of TIM's 2018 separate and consolidated financial statements the PricewaterhouseCoopers audit mandate expired and could not be renewed until at least four financial years have elapsed from the date of termination of the previous assignment.

In accordance with the new legislative and regulatory framework, in 2017 TIM started, under the responsibility and supervision of its Board of Statutory Auditors, the selection process for the new Group Sole Auditor for the nine-year period from 2019 to 2027.

The Annual Shareholders' Meeting of April 24, 2018 did not reach a quorum for the resolution on the conferral of the new audit engagement and therefore deferred this nomination to a subsequent Shareholders' Meeting.

As a result, the Annual Shareholders' Meeting of March 29, 2019, was called upon to resolve the conferral of the new audit engagement on the proposal of the Board of Auditors and to determine the relative fee for each year of the 2019-2027 period, as well as the criteria for the related adjustment.

6.5 EMPLOYEES

6.5.1 EMPLOYEES AND CHANGES IN THE TIM GROUP

The number of Group employees at December 31, 2018 and 2017 was the following:

	As of December 31,		
	2018	2017	Changes
		(units)	
Employees—Italy	48,005	49,689	(1,684)
Employees—Foreign	9,896	9,740	156
Total Employees at payroll	**57,901**	**59,429**	**(1,528)**

The decrease in workforce (excluding employees with temporary work contracts) of 1,528 units compared to December 31, 2017, is the result of the workforce turnover in 2018. In detail:

	Hirings	Terminations	Changes
		(units)	
Domestic	547	2,198	(1,651)
Brazil	2,563	2,413	150
Other Operations	33	60	(27)
Turnover	**3,143**	**4,671**	**(1,528)**

TIM S.p.A.

	As of December 31,		
	2018	2017	Changes
		(units)	
Personnel on payroll	42,656	44,281	(1,625)

Tim Brasil group

	As of December 31,		
	2018	2017	Changes
		(units)	
Tim Brasil group—Total	9,658	9,508	150

For further information on employees, please see "Note—Employee benefits expenses" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

6.5.2 INDUSTRIAL RELATIONS

TIM S.p.A. The Industrial Relations model

TIM has developed its industrial relations model over time to be geared towards ensuring constant dialogue and constructive engagement aimed at promoting the appropriate participation of trade union representatives and organizations.

The structure of TIM's current industrial relations model, formalized with the trade unions in the Protocol of June 23, 2016, is aimed at enhancing collaboration on matters required by law and collective bargaining, in the areas of information, consultation and negotiation, both at national and regional level.

At a local level, there is a widespread presence of trade union representatives in all the Italian regions, which fosters an active decentralized participation allowing the specific regional needs and opportunities to be better understood and combined by both parties. Today, 450 TIM employees hold the office of trade union representative. TIM recognizes specific prerogatives defined by company agreements in force at the time for union representatives in the Company, in addition to the protections and rights provided by law and the TLC national labor agreement.

Due to the organizational complexity and multi-regional presence, trade union representatives elected a national representative body—(in line with the Consolidated Law on Representation January 10, 2014) called the National Trade Union Representatives Coordinator, delegated to manage negotiations with the Company for matters of a national nature.

The industrial relations system is set up with a focus on preventive phases of information and union discussions, also through specific corporate bodies (in the form of permanent joint commissions*)* with the task of the technical development of specific subjects such as training and occupational health and safety.

This system is based on a widespread knowledge of the Company's strategies, as well as a particular focus on the protection of collective interests and the professional development of workers, enhancing the dialogue that takes place both nationally and locally.

The 2018-2020 Business Plan and the application agreements for the 2019-2020 two-year period

The framework described above has allowed agreements to be reached for the implementation of efficiency improvement plans that can mediate between the needs of the workers and those of the Company. For example, a complex negotiation process involving the leading trade union organizations was completed in late 2015 with the signing of a framework agreement to manage staff redundancies. Like its predecessors, the agreement provided for the use of a *mixture* of integrated instruments and measures that are not socially traumatic but that are economically sustainable, including the use in 2016-2017 of Defensive Solidarity Contracts, as required by the *Jobs Act*, combined with the strategic role of the training lever, as a pivotal element to encourage professional retraining and re-qualification in order to counteract redundancies. Defensive Solidarity Contracts are agreements that provide for working hours to be reduced in order to avoid downsizing. For the workers to whom the contract will be applied, provision is made for INPS (Istituto Nazionale della Previdenza Sociale) to make up part of the remuneration not received due to the reduction in working hours.

The 2018-2020 Business Plan management agreement provided that at the end of the Defensive Solidarity Contracts two-year period the parties would define—as indicated in the framework agreement plan—a subsequent agreement to also ensure occupational protection for the 2018 financial year, through a Solidarity Contract with a duration of 12 months. Having noted the impossibility of implementing the planned programme, TIM had to identify new solutions to support the objectives of the 2018-2020 Business Plan.

In this framework negotiations took place with the National Trade Union Representatives Coordinator and the trade unions for the national labor agreement, launched January 2018 and in line with the 2018-2020 Business Plan and related employment measures, in an attempt to identify a balanced and timely solution to meet business needs and objectives.

The negotiations took place over numerous sessions where TIM put forward its proposal based on a plan to make around 6,500 staff reductions without forced redundancies and the recruitment of about 2,000 young people. This proposal was not agreed by the union.

In March 2018, negotiations reopened and TIM further outlined its operating market scenario, the sector trends and the guidelines of the 2018-2020 Business Plan, approved by the BoD in March 2018, detailing the guidelines and programs in place to take better advantage of business opportunities, as well as the plan's organizational repercussions and consequent effects on employment levels. The Company has therefore put forward new proposals in the hope of identifying shared solutions for plan management but this attempt to reach shared and sustainable solutions has not been agreed upon by the trade unions either.

The agreement of June 2018 concludes its complex path, as part of the joint examination sessions pursuant to Art. 24 of Legislative Decree No. 148/2015, with the signing of an agreement with the Ministry of labor and Social Policy, which has defined a series of measures and actions to support the pursuit of business objectives and management of the 4,500 announced redundancies and connected to the 2018-2020 Business Plan, approved in March 2018, through unforced and socially sustainable methods.

In summary, in the signed agreements framework, the parties have agreed to:

- the application of the Defensive Solidarity Contract, affecting about 30,000 TIM people; The contract provides for a vertical reduction of working hours of 10%, out of a total of 26 days over 12 months, distributed on a predefined calendar, starting in June 2018;
- the confirmed early retirements under the agreement of October 2015 pursuant to Art. 4 of law No. 92/2018 planned for the year 2018, while for the two-year period 2019-2020 a new agreement is expected for a further 4,000 early retirements;
- the shared intention to begin negotiations on specific issues such as the performance bonus, holidays and second level bargaining, aimed at safeguarding the company's competitive ability, improving labor productivity and operating efficiency, in the context of people development; and
- the opportunity to relaunch industrial relations, with a path of negotiations, which take on a central importance in the process of radically changing the Group's organizational, productive and competitive conditions.

In line with the commitments referred to in the agreements of June 2018:

- a specific agreement on performance bonuses was signed in July 2018, which reconfigures the mechanisms for providing the EBITDA indicator value in line for that defined for management by objectives (MBOs) for senior management for the remaining duration of the agreement. The threshold set for EBITDA (weighted at 40%) is 95% with a return of 70% on the value of the perfomance bonus;
- negotiations on Industrial Relations and second bargaining levels have been launched.

Work-life agreements

- In September 2018, the Company and trade union signed specific agreements, aimed at facilitating working methods for 700 TIM employees in Genoa and the province, following the collapse of the Morandi bridge. In particular, the memorandum of understanding provides for the adoption of temporary extraordinary measures to reduce the inconvenience for employees both for travel between home and work, and that related to carrying out their professional activities, with the intention to assist with the state of emergency in the city.
- For staff in Rome and Bari, cities with particular interests in the company office rationalization project, an agreement was reached to extend the number of agile working days at home agreement for 2018, to facilitate the work-life balance.
- In 2018, TIM employees were able to choose to take advantage of a days of paid leave in lieu of the economic payment contractually agreed for the November 4 bank holiday. This opportunity, also aimed at promoting work-life balance, was shared in agreement with the trade unions. At local level, similar agreements were signed for the local patron saint holidays falling on Sundays in 2018.

Senior Management Staff

In February 2018 an agreement was signed with the senior management staff trade union representative, which will allow for a resignation incentive, through a mix of new and socially sustainable instruments, such as Art. 4 of Law 92/2012, to ensure efficiency targets over the period are met (100 Executives in the TIM, Olivetti, INWIT, HRS, Sparkle, Telecontact Centre and TI Trust Technologies areas). The agreement also provides, in line with the legislative changes on the subject, a welfare plan for the Group's senior management for the two-year 2018-2019 period.

In Brazil

In 2018, TIM Participações held two meetings with national federations that together represent the country to negotiate the renewal of the 2018/2019 Profit Sharing Plan. In addition, the renewal of the 2018/2020 Collective labor Contract was also addressed, which included, among other things, new clauses for 20-day paternity leave, a holiday for call center operators and the possibility for women to return early from maternity leave in certain circumstances.

6.6 COMPENSATION OF DIRECTORS, OFFICERS AND MEMBERS OF THE BOARD OF AUDITORS

6.6.1 Compensation of Directors

The General Shareholders' Meeting held on May 4, 2018 set the maximum total annual remuneration for the Board of Directors, which will remain in office until the approval of the 2020 financial statements, at 2.2 million euros, in accordance with article 2389, first paragraph, of the Italian Civil Code. This amount is to be divided amongst the directors in accordance with the resolutions adopted by the Board itself on this point.

The above mentioned overall amount is distributed as follows (gross amounts on a yearly basis):

- 100,000 euros to be paid to each director in office (excluding the Chairman of the Board and the CEO);
- an additional 45,000 euros to be paid to each member of the Control and Risk Committee;
- an additional 40,000 euros to be paid to each member of the Nomination and Remuneration Committee;
- an additional 20,000 euros to be paid to the Chair of each of the Control and Risk Committee and Nomination and the Nomination and Remuneration Committee;
- an additional 25,000 euros to be paid to each member of the Related Parties Committee;
- an additional 15,000 euros to be paid to the Chair of the Related Parties Committee;
- an additional 25,000 euros to be paid to each member of the Strategic Committee (other than the Chair of the Board of Directors and the CEO).

The total compensation paid by TIM and by the TIM Group subsidiaries in 2018 to the members of the Board of Directors of TIM was 4.2 million euros.

EXECUTIVE CHAIRMAN (Arnaud de Puyfontaine)

January 1—April 24, 2018

The position of Executive Chairman was held by Arnaud Roy de Puyfontaine from the beginning of the year to April 24, 2018. During the Board of Directors' meeting held on March 22, 2018, the Executive Chairman resigned from office. This resignation came into effect as of April 24, 2018.

During the period, his remuneration was represented by the emolument provided for under Article 2389, paragraph 3, of the Italian Civil Code, consisting of a fixed component of 900,000 euro gross per annum, and a variable component in the form of an MBO totaling, at target, 900,000 euro gross per annum, not including remuneration as a member of the Board of Directors and of the Strategy Committee.

The Executive Chairman did not receive any variable short-term remuneration.

CHAIRMAN (Fulvio Conti)

May 7—December 31, 2018

TIM's Board of Directors' meeting, held on May 7, 2018 following the renewal decided by the Shareholders' Meeting of May 4, appointed Fulvio Conti as Chairman of the Company.

The Chairman was only granted the powers provided for by law, the Articles of Association and the Company's corporate governance documents.

Below please find the description of the Chairman's compensation package decided by the Board of Directors on July 24, 2018 and on February 20, 2019:

(1) A fixed emolument, established on an annual basis, of 600,000 euro gross per annum. The Chairman does not receive any remuneration as a Director, or as member of the Strategy Committee (pursuant to Article 2389, paragraph 1, of the Italian Civil Code).

(2) End-of-office payment of either nil or 400,000 euro gross, subject to the Chairman's performance. Therefore, the bonus will be paid if the office effectiveness evaluation in the Board Review results in a score of at least 4 on a scale of 1 to 5 for each of the years 2019 and 2020. In any other case, the bonus will not be paid.

(3) No benefits (only reimbursement of expenses incurred for the purposes of office, as established by the Articles of Association), no clawback, and no severance pay.

The Board of Directors' meeting of November 13, 2018, following the Director Amos Genish ceasing the role of Chief Executive Officer, assigned all powers to the Chairman of the Board of Directors who exercised them until the next Board of Directors' meeting of 18 November (which appointed Director Luigi Gubitosi as Chief Executive Officer).

No additional remuneration was paid for the aforementioned temporarily held powers.

EXECUTIVE DEPUTY CHAIRMAN (Giuseppe Recchi)

January 1—March 22, 2018

TIM's Board of Directors' meeting held on March 22, 2018, acknowledged the resignation of the Executive Deputy Chairman (and Chairman of the Strategy Committee), Giuseppe Recchi, with immediate effect.

During the period, his remuneration (in addition to that received for the office of Director and/or member of Committees) totaled 45,000 euro gross per annum.

The Vice Executive Chairman did not receive any variable short-term remuneration.

Given the Executive Deputy Chairman was temporarily assigned organizational responsibility for the Security Department and responsibility for the governance of the wholly owned subsidiary Telecom Italia Sparkle S.p.A., he was paid an additional fee of 2017 10,000 euro gross per month, until his remuneration could be completely reviewed, that is, upon implementation of the governance arrangements designed to meet the requirements of the Golden Power rules. This temporary period remained valid until the appointment was terminated.

DEPUTY CHAIRMAN (Franco Bernabè)

March 22—May 4, 2018

TIM's Board of Directors' meeting held on March 22, 2018, having acknowledged the resignation of the Executive Deputy Chairman Giuseppe Recchi, with regard to the powers over the Security Department and over the Companies operations and assets of importance for national security and defense, appointed Franco Bernabè (already a member of the Strategic Committee) as Managing Director with similar responsibilities regarding company security. The role of Vice Chairman was conferred on him, with the responsibilities set out in law and statute.

No additional fixed and variable remuneration was acknowledged for the post of Deputy Chairman. As indicated in the table below for period January 1, 18—May 4, 2018 his remuneration was that of Director and member of the Strategic Committee.

CHIEF EXECUTIVE OFFICER (Amos Genish)

January 1—November 13, 2018 (as Management)

January 1—November 14, 2018 (as Employee)

During the period, Mr. Genish's gross salary as the Company's General Manager, amounted to 1,000,000 euro gross per annum, while his remuneration as Chief Executive Officer, pursuant to Article 2389, paragraph 3, of the Italian Civil Code, was fixed (confirmed downstream of renewal of the Board of Directors by the Shareholders' Meeting of May 4, 2018) at 400,000 euro gross per annum, exclusive of his remuneration for the position of Director and for his membership on the Strategy Committee. Furthermore, as remuneration pursuant to Article 2389, paragraph 3, of the Italian Civil Code, he was assigned an MBO totaling, at target, 1,400,000 euros per annum, gross.

Given certain TIM metrics (EBITDA threshold) were not reached, the MBO measure for 2018 was cancelled.

In implementing the present individual contract between Mr. Genish and the Company, and following the launch of the Long-term Incentive Plan 2018-2020, decided by the Board of Directors at its meeting held on July 24, 2018, Mr. Genish was assigned the right to receive 16,666,667 TIM S.p.A ordinary shares, at target, for the two years 2019-2010. Depending on the degree to which performance targets for the three-year period 2018-2020 are met, this number may be reduced or may be raised up to a maximum of 26,666,667 shares.

On November 13, 2018, the Board of Directors of TIM revoked all attributions granted to the director Amos Genish and appointed the Chairman Fulvio Conti to finalize the activities relating to the termination of the employee relationship, which came into effect as of November 14, 2018.

For termination of his employment, Mr. Genish was paid the final additional amounts due and the severance pay due under law and national labor agreement (severance pay, holiday pay, thirteenth month payments) and, for the office held, a fixed sum to cover the costs of housing, schooling, transport and travel, as agreed in his individual contract with the Company, as reported in last year's Remuneration Report.

Mr Genish is not due any amount as an MBO (as above), nor for the Long-term Incentive 2018-2020 (as per Plan Regulation).

CHIEF EXECUTIVE OFFICER (Luigi Gubitosi)

November 18—December 31, 2018

The Company's Board of Directors, at its meeting held on November 18, 2018, appointed Luigi Gubitosi as Chief Executive Officer, and at the same time hired him as a manager on a permanent employment contract, appointing him General Manager.

During the period, gross remuneration for his employment by the Company amounts to 1,000,000 per annum, gross, and a fixed sum of 400,000 euros per annum, gross, was awarded to him as remuneration pursuant to Article 2389, subsection 3, of the Italian Civil Code (excluding remuneration for serving as a Director, pursuant to Article 2389, subsection 1, of the Italian Civil Code, and for membership of the Strategy Committee). For the same purpose, he was also awarded an MBO with a target amount 1,400,000 euros gross for 2019.

As part of the Long-term Incentive 2018-2020 Plan, Mr Gubitosi was attributed for the 2019-2020 period the right to receive 10,980,392 ordinary TIM S.p.A. shares free of charge at target level. Depending on the degree to which performance targets for the three-year period 2018-2020 are met, this number may be reduced or may be raised up to a maximum of 19,215,686 shares.

***

The following table lists the Directors who served during 2018 and their respective compensation as of December 31, 2018, according to the disclosure format set forth by Consob, the Italian market regulator (Regulation for the implementation of Legislative Decree dated February 24, 1998, adopted by Consob under Resolution 11971 dated May, 14, 1999 and subsequent amendments and additions):

					Column 1	Column 2	Column 3	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Notes	Name and surname	Position	Period for which the position was held	Expiry of term of office (mounth/ year)	Fixed remuneration	Remuneration for involvement in committees	Variable non-equity remuneration		Non-monetary benefits	Other remuneration	Total	Fair Value of equity remuneration	Compensation for loss of office or termination of employment
							Bonuses and other incentives	Profit sharing					
							(thousands of euros)						
	Current Board of Directors												
1	Fulvio Conti	Chairman	5/7 – 12/31/2018	Dec-20	392						392		
2	Luigi Gubitosi	Chief Executive Officer	11/18 – 12/31/2018	Dec-20									
		General Manager			168						168		
3	Amos Genish	Chief Executive Officer	07/05 – 11/13/2018	Dec-20	1,065		112		30		1,207		
		General Manager	01/01 – 11/14/2018										
4	Luigi Gubitosi	Director	05/04 – 11/17/2018	Dec-20	54	35					89		
5	Amos Genish	Director	01/01 – 12/31/2018	Dec-20	16						16		
6	Alfredo Altavilla	Director	05/04 – 12/31/2018	Dec-20	66	37					103		
7	Paola Bonomo	Director	05/04 – 12/31/2018	Dec-20	66	25					91		
8	Giuseppina Capaldo	Director	05/04 – 12/31/2018	Dec-20	66	37					103		
9	Maria Elena Cappello	Director	05/04 – 12/31/2018	Dec-20	66	16					82		
10	Massimo Ferrari	Director	05/04 – 12/31/2018	Dec-20	66	44					110		
11	Paola Giannotti	Director	05/04 – 12/31/2018	Dec-20	66	41					107		
12	Marella Moretti	Director	05/04 – 12/31/2018	Dec-20	66	41					107		
13	Lucia Morselli	Director	05/04 – 12/31/2018	Dec-20	66	28					94		
14	Dante Roscini	Director	05/04 – 12/31/2018	Dec-20	66	16					82		
15	Arnaud Roy de Puyfontaine	Director	05/04 – 12/31/2018	Dec-20	66	16					82		
16	Rocco Sabelli	Director	05/04 – 12/31/2018	Dec-20	66	41					107		
17	Michele Valensise	Director	05/04 – 12/31/2018	Dec-20	66	48					114		
	Total Current Board of Directors				**2,487**	**425**	**112**	**0**	**30**	**0**	**3,054**		
	Previous Board of Directors												
18	Arnaud Roy de Puyfontaine	Executive Chairman	01/01 – 04/24/2018	Dec-19	288						288		
19	Giuseppe Recchi	Executive Deputy Chairman	01/01 – 03/22/2018	Dec-19	38						38		
20	Amos Genish	Chief Executive Officer	01/01 – 04/24/2018	Dec-19	128						128		
21	Giuseppe Recchi	Director	01/01 – 03/22/2018	Dec-19	25	9				13	47		
22	Camilla Antonini	Director	01/01 – 04/24/2018	Dec-19	35	14					49		

Notes	Name and surname	Position	Period for which the position was held	Expiry of term of office (mounth/ year)	Column 1 Fixed remuneration	Column 2 Remuneration for involvement in committees	Column 3 Variable non-equity remuneration		Column 4 Non-monetary benefits	Column 5 Other remuneration	Column 6 Total	Column 7 Fair Value of equity remuneration	Column 8 Compensation for loss of office or termination of employment
							Bonuses and other incentives	Profit sharing					
					(thousands of euros)								
23	Franco Bernabè	Director	01/01 – 05/04/2018	Dec-19	38	9					47		
24	Ferruccio Borsani	Director	01/01 – 05/04/2018	Dec-19	38	14					52		
25	Francesca Cornelli	Director	01/01 – 05/04/2018	Dec-19	38	15					53		
26	Lucia Calvosa	Director	01/01 – 05/04/2018	Dec-19	53	22					75		
27	Frédèric Crépin	Director	01/01 – 04/24/2018	Dec-19	35	21					56		
28	Dario Frigerio	Director	01/01 – 05/04/2018	Dec-19	38	9					47		
29	Felicité Herzog	Director	01/01 – 04/24/2018	Dec-19	35	14					49		
30	Anna Jones	Director	01/01 – 04/24/2018	Dec-19	35	19					54		
31	Marella Moretti	Director	01/01 – 04/24/2018	Dec-19	35	14					49		
32	Hervé Philippe	Director	01/01 – 04/24/2018	Dec-19	35	13					48		
33	Danilo Vivarelli	Director	01/01 – 05/04/2018	Dec-19	38	14					52		
	Total Previous Board of Directors				**932**	**187**				**13**	**1,132**		
	Total				**3,419**	**612**	**112**	**—**	**30**	**13**	**4,186**	**—**	**—**

(1) **Fulvio Conti—Chairman**

col. 1 The amount refers to the fixed remunerations pursuant to Art. 2389 paragraph 3 of the Italian Civil Code received for the position of Chairman for the period 05/07-12/31/2018. The Chairman does not receive any remuneration as a Director or as member of the Strategy Committee (pursuant to Article 2389, paragraph 1, of the Italian Civil Code).

(2) **Luigi Gubitosi—Chief Executive Officer and General Manager**

col. 1 The amount includes the remuneration as employee (€/000 119) for the period in which he held the position of General Manager 11/18-12/31/2018 and the fixed remuneration pursuant to Art. 2389 paragraph 3 Italian Civil Code (€/000 49) for the period he held the position of Chief Executive Officer 11/18-12/31/2018. The Chief Executive Officer does not receive remuneration for the office of Director or for his membership of the Strategy Committee (pursuant to Art. 2389, subsection 1 of the Italian Civil Code).

(3) **Amos Genish—Chief Executive Officer and General Manager**

col. 1 The amount includes the remuneration as employee (€/000 859) for the period in which he held the position of General Manager 01/01-11/14/2018 and the fixed remuneration pursuant to Art. 2389 paragraph 3 Italian Civil Code (€/000 206) for the period he held the position of Chief Executive Officer 05/07-11/13/2018. In the period in which he held the role, the Chief Executive Officer did not receive remuneration for the office of Director or for his membership of the Strategy Committee (pursuant to Art. 2389, subsection 1 of the Italian Civil Code).

col. 3 The lump sum bonus was paid to cover housing, school, transport, travel expenses, implementing what was agreed in his individual agreement with the company.

(4) **Luigi Gubitosi—Director**

col. 1 The amount refers to remuneration received as Director for the period 05/04-11/17/2018.

col. 2 The amount refers to remuneration received as member of the Strategic Committee for the period 05/16-11/17/2018 (€/000 12) and as member of the Control and Risk Committee for the period 05/16-11/17/2018 (€/000 23).

(5) **Amos Genish—Director**

col. 1 The amount refers to the remuneration received as Director for the period 04/25-05/03/2018 (€/000 2) and for the period 11/14-12/31/2018 (€/000 14).

(6) **Alfredo Altavilla—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee for the period 05/16-12/31/2018(€/000 25) and as President of the Nomination and Remuneration Committee for the period 05/16-12/31/2018 (€/000 12).

(7) **Paola Bonomo—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee for the period 05/16-12/31/2018(€/000 25).

(8) **Giuseppina Capaldo—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Related Parties Committee for the period 05/16-12/31/2018 (€/000 16) and as member of the Nomination and Remuneration Committee for the period 06/25-12/31/2018 (€/000 21).

(9) **Maria Elena Cappello—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Related Parties Committee for the period 05/16-12/31/2018.

(10) **Massimo Ferrari—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee for the period 05/16-12/31/2018 (€/000 16) and as member of the Control and Risk Committee for the period 05/16-12/31/2018 (€/000 28).

(11) **Paola Giannotti—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risk Committee for the period 05/16-12/31/2018 (€/000 28) and as President of the Control and Risk Committee for the period 05/16-12/31/2018 (€/000 13).

(12) **Marella Moretti—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risk Committee for the period 05/16-12/31/2018 (€/000 28) and as member of the Related Parties Committee for the period 06/25-12/31/2018 (€/000 13).

(13) **Lucia Morselli—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Related Parties Committee for the period 05/16-12/31/2018 (€/000 16) and as Chairman of the Related Parties Committee for the period 05/16-12/31/2018 (€/000 10) and as member of the Control and Risk Committee for the period 12/06-12/31/2018 (€/000 2).

(14) **Dante Roscini—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Related Parties Committee for the period 05/16-12/31/2018.

(15) **Arnaud Roy de Puyfontaine—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee for the period 05/16-12/31/2018.

(16) **Rocco Sabelli—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee for the period 16/05-31/12/2018 (€/000 16) and as member of the Nomination and Remuneration Committee for the period 05/16-12/31/2018 (€/000 25).

(17) **Michele Valensise—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee for the period 05/16-12/31/2018 (€/000 25) and as member of the Control and Risks Committee for the period 06/25-12/31/2018 (€/000 23).

(18) **Arnaud Roy de Puyfontaine—Executive Chairman**

col. 1 The amount refers to the fixed remuneration pursuant to Art. 2389 paragraph 3 of the Italian Civil Code received for the position of Executive Chairman for the period 01/01-04/24/2018. In the period in which he fulfilled the role, the Executive Chairman did not receive remuneration for the office of Director or for his membership of the Strategy Committee (pursuant to Art. 2389, subsection 1 of the Italian Civil Code).

(19) **Giuseppe Recchi—Deputy Executive Chairman**

col. 1 The amount includes the fixed remuneration pursuant to Art. 2389 paragraph 3 Italian Civil Code received for the office of Deputy Executive Chairman (€/000 10) and the additional remuneration acknowledged for the organizational responsibility of the Security Function (€/000 28) for the period 01/01-03/22/2018.

(20) **Amos Genish—Chief Executive Officer and General Manager**

col. 1 The amount refers to the fixed remuneration pursuant to Art. 2389 paragraph 3 of the Italian Civil Code received for the position of Chief Executive Officer for the period 01/01 –04/24/2018. In the period in which he fulfilled the role, the Chief Executive Officer did not receive remuneration for the office of Director or for his membership of the Strategy Committee (pursuant to Art. 2389, subsection 1 of the Italian Civil Code).

(21) **Giuseppe Recchi—Director**

col. 1 The amount refers to remuneration received as Director (€/000 25) for the period 01/01-03/22/2018.

col. 2 The amount refers to remuneration received as Chairman of the Strategic Committee (€/000 3) and member of the Strategic Committee (€/000 6) for the period 01/01-03/22/2018.

col. 5 The amount refers to remuneration pursuant to Art. 2389 paragraph 1 Italian Civil Code received as Director of INWIT S.p.A. for the period 01/01-04/12/2018.

(22) **Camilla Antonini—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee.

(23) **Franco Bernabè—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee.

(24) **Ferruccio Borsani—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee.

(25) **Francesca Cornelli—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee.

(26) **Lucia Calvosa—Director**

col. 1 The amount refers to remuneration received as Board Director (€/000 38) and Director with functions as link between the Board of Directors and the company control structures which report hierarchically to the Board of Directors (€/000 15).

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee (€/000 15) and as Chairman of the Control and Risks Committee for the period (€/000 7).

(27) **Frédéric Crépin—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee (€/000 8) and member of the Nomination and Remuneration Committee (€/000 13).

(28) **Dario Frigerio—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee.

(29) **Félicité Herzog—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee.

(30) **Anna Jones—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nominations and Remunerations Committee (€/000 13) and as Chairman of the Nomination and Remuneration Committee (€/000 6).

(31) **Marella Moretti—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee.

(32) **Hervé Philippe—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee.

(33) **Danilo Vivarelli—Director**

col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee.

6.6.2 Compensation of Executive Officers

The total compensation due to the Company's executive officers by the Company or by any of the Company's subsidiaries in 2018 (including the Chief Executive Officer, Executive Chairman and the Deputy Executive Chairman) was 14.0 million euros.

In case of severance, the settlement set out in law, in the Collective Employment Agreement and in supplementary company agreement apply.

There are no general non-competition policies for executive officers with strategic responsibilities.

Applicable Italian law requires disclosure of individual compensation in the form of stock options for General Managers and, in the aggregate and divided by plan, the stock options granted by TIM S.p.A. to Executive Officers as a group.

The specific provisions and the information relating to the current Chief Executive Officer, who is an employee of the Company, are described under 6.6.1 "Compensation of Directors".

The following tables have been prepared according to the format required by the Regulation for the implementation of Legislative Decree dated February 24, 1998, adopted by Consob under Resolution 11971 dated May 14, 1999 and subsequent amendments and additions.

	Options assigned in previous financial years				Options assigned during the financial year						Options exercised during the financial year			Options expired during the financial year	Options held at the end of the financial year	Options for the Year
Position	Plan and respective resolution	Number of financial instruments	Strike price	Possible exercise period (from – to)	Number of financial instruments	Strike price	Possible exercise period (from – to)	Fair value on assignment date (in euros)	Date of assignment	Market price on assignment	Number of financial instruments	Strike price	Market price	Number of financial instruments	Number of financial instruments	Fair Value (in euros)
Remuneration in the company that draws up the financial statements																
Executive Officers	2014 Stock Option Plan 4/16/2014	1,704,571	€0.94—€1.01 —€1.15	2017/2020										627,445(1)	1,077,126	
Remuneration from subsidiaries and associates																
Executive Officers	2016 Stock Option Plan	632,184	R$ 8.0977(2)	2017/2022										632,184(3)		

(1) Balance between those options held at the time of sale, and those held at the time of entering/exiting the category of Key Managers with Strategic Responsibilities.

(2) The price exercised may be corrected based on conditions established in the plan.

(3) Options are acknowledged in cash based on the spread between the exercise price and the average value of shares ON TIMP3, weighted for the volume negotiated, in the negotiation sessions of the 30 days prior to the transfer date.

6.6.3 COMPENSATION OF MEMBERS OF THE BOARD OF AUDITORS

The General Shareholders' Meeting of April 24, 2018 (which appointed the current Board of Auditors) authorized annual compensation of 95,000 euros for each Auditor and 135,000 euros for the Chairman of the Board of Auditors. Such compensation took into account the role of Board of Statutory Auditors acting as Supervisory Panel established under Legislative Decree 231/2001.

The total compensation paid by the Company or by any of the TIM Group subsidiaries in 2018 to the members of the Board of Auditors was approximately 520 thousand euros.

Individuals	Description of the position			Compensation				
Name	Position held	Period during which position was held	Office expiry	Compensation base	Non cash benefits	Bonuses and other incentives	Other Compensations	Total
				(thousands of euros)				
Roberto CAPONE(1)	Chairman	1/1-12/31/2018	12/31/2020	136				136
Giulia DE MARTINO(2)	Acting Auditor	4/24-12/31/2018	12/31/2020	65				65
Anna DORO(3)	Acting Auditor	4/24-12/31/2018	12/31/2020	65				65
Marco Fazzini(4)	Acting Auditor	4/24-12/31/2018	12/31/2020	65				65
Francesco SCHIAVONE PANNI(5)	Acting Auditor	4/24-12/31/2018	12/31/2020	65				65
Vincenzo CARIELLO(6)	Acting Auditor	1/1-4/24/2018	12/31/2017	31				31
Gabriella CHERSICLA(7)	Acting Auditor	1/1-4/24/2018	12/31/2017	31				31
Gianluca PONZELLINI(8)	Acting Auditor	1/1-4/24/2018	12/31/2017	31				31
Ugo ROCK(9)	Acting Auditor	1/1-4/24/2018	12/31/2017	31				31
Total				**520**				**520**

(1) **Roberto Capone—Chairman of the Board of Statutory Auditors**

This amount refers to the compensation received as Chairman of the Board of Statutory Auditors.

(2) **Giulia De Martino—Acting Auditor**

This amount refers to the compensation received as Acting Auditor.

(3) **Anna Doro—Acting Auditor**

This amount refers to the compensation received as Acting Auditor.

(4) **Marco Fazzini—Acting Auditor**

This amount refers to the compensation received as Acting Auditor

(5) **Francesco Schiavone Panni—Acting Auditor**

This amount refers to the compensation received as Acting Auditor.

(6) **Vincenzo Cariello—Acting Auditor**

This amount refers to the compensation received as Acting Auditor.

(7) **Gabriella Chersicla—Acting Auditor**

This amount refers to the compensation received as Acting Auditor.

(8) **Gianluca Ponzellini—Acting Auditor**

This amount refers to the compensation received as Acting Auditor

(9) **Ugo Rock—Acting Auditor**

This amount refers to the compensation received as Acting Auditor.

6.7 OPTIONS TO PURCHASE SECURITIES FROM REGISTRANT

Equity compensation plans in place at December 31, 2018 are used for retention purposes and to offer long-term incentives to Group managers and personnel.

For a summary of the plans in place at December 31, 2018, please see "Note—Equity Compensation Plans" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

Item 7. MAJOR SHAREHOLDERS AND RELATED-PARTY TRANSACTIONS

7.1 MAJOR SHAREHOLDERS

At December 31, 2018, according to the shareholders register and other information in the Company's possession, the parties which held ordinary shares, directly or indirectly, in excess of 3% of the ordinary share capital of TIM were the following

		As of December 31, 2018	
Major Shareholders	Type of ownership	No. Ordinary Shares	% of ordinary share capital
Vivendi S.A.	(direct)	3,640,109,990	23.94
Paul E. Singer	(indirect)	1,345,124,573	8.85(*)
Cassa Depositi e Prestiti S.p.A	(direct)	750,000,000	4.93(**)

(*) Paul E. Singer is General Partner of Elliott Capital Advisors LP. The indirect shareholding is held through the controlled companies Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership. Following communications received for participation in the Telecom Italia Shareholders' Meeting of April 24, 2018, the shareholding increased to 9.19% of the ordinary share capital. At the Shareholders' Meeting of May 4, 2018, Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership participated with a number of shares equal to 8.27% of the ordinary share capital.

(**) Shareholding registered for the TIM Shareholders' Meeting of May 4, 2018. On April 11, 2018 Cassa Depositi e Prestiti S.p.A. disclosed a shareholding to Consob and the Company equal to 4.26% of the ordinary share capital.

At December 31, 2018, TIM held 37,672,014 of its own Ordinary Shares, while the subsidiary Telecom Italia Finance S.A. held another 126,082,374 Ordinary Shares, for a total of 1.08% of capital with voting rights.

As of April 8, 2019, the above mentioned position was the following:

		As of April 8, 2019	
	Type of ownership	No. Ordinary Shares	% of ordinary share capital
Vivendi S.A.	(direct)	3,640,109,990	23.94
Cassa Depositi e Prestiti S.p.A.	(direct)	1,503,750,000	9.89(*)
Paul E. Singer	(indirect)	1,451,475,688	9.55(**)
Canada Pension Plan Investment Board	(direct/indirect)	492,227,486	3.24(***)

(*) as results from participation in the TIM Shareholders' Meeting of March 29, 2019.

(**) Paul E. Singer is General Partner of Elliott Capital Advisors LP. The indirect shareholding is held through the controlled companies Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership. At the TIM Shareholders' Meeting of March 29, 2019 the afore-mentioned companies participated with a shareholding equal to 8.81% of the ordinary share capital.

(***) Canada Pension Plan Investment Board participated at the TIM Shareholders' Meeting of March 29, 2019 with a direct shareholding equal to 3.21% of the ordinary share capital. On the basis of a disclosure of major shareholdings pursuant to Art.120 of Legislative Decree 58/1998, CPPIB Map Cayman SPC holds a further 0.03% of the ordinary share capital.

All ordinary shares held by TIM shareholders entitle shareholders to participate and vote in ordinary shareholder meetings of the Company with the same rights and at the same conditions.

For more details about the significant changes in the percentage of ownership held by major shareholders, please see "Item 4. Information on the TIM Group—4.1 Business—4.1.1 Background".

7.1.1 SHAREHOLDERS' AGREEMENTS

In 2018, there were no shareholder agreements in force, relating to TIM pursuant to Article 122 of Italian Legislative Decree 58/1998.

The information contained herein regarding shareholders' agreements has been derived from publicly available information filed by the parties involved with regulatory authorities. So far as TIM is aware, no facts have been omitted herein which would render the information misleading. No further or other responsibility in respect of such information is accepted by TIM.

7.1.2 Shareholders Ownership

❖ Board of Directors

In accordance with applicable Italian law, the following table shows the investments held in TIM S.p.A. and in the related subsidiaries by all the individuals who, during 2018 or a part of that year, have held the post of director in TIM S.p.A.

Name	Company	Class of shares	Number of shares held at the end of 2016 (or at the date of appointment)	Number of shares purchased in 2017	Number of shares sold in 2017	Number of shares held at the end of 2017 (or as of the date on which individual left post, if before)
Giuseppe RECCHI	TIM S.p.A.	Ordinary	1,000,000		1,000,000	—
		Savings		1,200,000		1,200,000
Dario FRIGERIO	TIM S.p.A.	Ordinary	600,000	—	—	600,000
Hervé PHILIPPE	TIM S.p.A.	Ordinary	12,500	—	—	12,500
Flavio CATTANEO	TIM S.p.A.	Ordinary		1,500,000	—	1,500,000
Luca MARZOTTO	TIM S.p.A.	Savings	200,798	—	—	200,798

❖ Board of Auditors

No individuals who, during 2018 or a part of that year, have held the post of statutory auditor in TIM S.p.A. hold investments in TIM S.p.A. and in the related subsidiaries.

❖ Executive Officers

In accordance with applicable Italian law, the following table shows the investments held in TIM S.p.A. and in the related subsidiaries by all the individuals who, during 2017 or a part of that year, have held the post of executive officers in TIM S.p.A.

Company	Class of shares	Number of shares held at the end of 2017 (or at the date of appointment)	Number of shares purchased in 2018	Number of shares sold in 2018	Number of shares held at the end of 2018 (or as of the date on which individual left post, if before)
TIM S.p.A.	Ordinary	76,025	—	—	76,025
Tim Participacoes	Ordinary	—	55,645	—	55,645

* * *

As of April 8, 2019 no member of the Board of Directors, Board of Auditors or Executive Officers beneficially owned more than 1% of the Ordinary Shares or Savings Shares.

7.1.3 Continuing relationship with the Italian State

The Italian Government is in a position to exercise special powers with respect to TIM.

As indicated in the Order of the Presidency of the Council of Ministers made on September 28, 2017 (the "**September Order**"), the Company is subject to the obligations set out in legislative decree no. 21/2012 (the "**Golden Power Decree**") and possesses networks and equipment that perform "activities of strategic importance for the national security and defense system" (as specified in art. 1 of the Golden Power Decree) and networks and equipment "necessary to ensure the minimal supply and operation of essential public services" in the communications sector (as specified in art. 2 of the Golden Power Decree). As a result, TIM is subject to the Government's special powers. In particular, the acquisition of more than 3% of the Company's ordinary share capital must be notified to the Italian Government, that can oppose it, and the acts and resolutions of the Company regarding mergers or demergers, the transfer of the business or branches of the business (of TIM and

its subsidiaries), the relocation of TIM's registered offices to outside Italy, any changes in the company's purpose, the winding up of the company, the disposal of rights over certain tangible or intangible assets, and the acceptance of constraints that condition their use are subject to the Government's scrutiny and veto powers.

The September Order alleged TIM was subject to and had failed to comply with the obligation to notify, pursuant to art. 2 of the Golden Power Decree, Vivendi's acquisition of corporate control of TIM. The Company believes it had no such obligation to notify; nevertheless, on May 8, 2018 a fine of 74.3 million euros was imposed on TIM. The Company appealed against the fine to the Lazio TAR (the Administrative Court in Rome), applied for a stay of the collection of the fine, and issued a guarantee bond for such amount in favor of the Presidency of the Council. In July 2018, the Lazio TAR granted the Company's application and stayed the obligation to pay the fine, and set the date for a hearing on the merits of the appeal for May 2019. Consequently in the first half of 2018, TIM recognized 74.3 million euros as a provision for legal disputes, accounted for in the separate consolidated income statement among the other operating expenses. The payment of the fine (in case the Company's appeal were rejected) could take place no earlier than May 2019.

By order dated October 16, 2017 (the "**October Order**"), the Presidency of the Council of Ministers exercised the special powers set forth in article 1 of the Golden Power Decree and imposed specific governance and organizational obligations and conditions on TIM and its wholly-owned subsidiaries Telecom Italia Sparkle and Telsy. In particular:

- TIM, Telecom Italia Sparkle and Telsy shall set up an organizational unit responsible for the business activities that are relevant for national security (the "**Security Organization**");
- the Board of Directors of each such company shall have a Director with powers over the Security Organization (an Italian citizen, with a security clearance, deemed suitable for the role by the Government);
- the Security Organization shall be involved in all decision-making processes relating to strategic activities and the network and must be run by a security officer chosen from a slate of three persons proposed by the Security Intelligence Department at the Presidency of the Council of Ministers;
- TIM and the subsidiaries referred to above shall provide advance information on every decision that may, inter alia, reduce or transfer technological, operational or industrial capacity in strategic activities and file periodic reports with the ad hoc Monitoring Committee at the Presidency of the Council of Ministers (the "**Monitoring Committee**") in order to confirm compliance with all of the above obligations.

TIM, Telecom Italia Sparkle and Telsy mapped their assets and activities currently managed and relevant for defense and national security and set up their Security Organization. They submitted to the Presidency of the Council of Ministers their plan for compliance with the obligations and conditions set out in the October Order. To date, the proposed plan for compliance has not yet been approved and the slate of three persons has not yet been proposed by the Security Intelligence Department.

Consequently, pending discussion with the Monitoring Committee, on May 7, 2018 the Board of Directors of Telecom Italia temporarily appointed Mr. Stefano Grassi (the Head of the Company's security department) as Head of the Security Organization. This arrangement was notified to and accepted by the Monitoring Committee.

By separate order dated November 2, 2017 (the "**November Order**"), the Presidency of the Council of Ministers exercised the special powers set forth in article 2 of the Golden Power Decree and imposed specific obligations and conditions that require TIM:

- to adopt plans for the development, investment and maintenance of the network and equipment that are suitable to ensure the continuity of the provision of a universal service and to satisfy the needs of general interest in the medium to long term, and
- to create technical and organizational measures for risk management that can assure the integrity and security of the networks and the continuity of services.

In addition, the November Order requires the Company to provide advance notice to the Monitoring Committee of: (i) any change or reorganization of the ownership structure of the Company and its subsidiaries, and (ii) any plan for the disposal or transfer of strategic assets and any resolution of the Board of Directors that may impact

the security, availability or operation of the networks and equipment or the continuity of universal service. Finally, the Company is required to submit periodic reports to the Monitoring Committee in order to confirm compliance with these obligations.

The Company has submitted an extraordinary appeal to the President of the Republic to request abrogation of the September Order, the October Order and the November Order.

7.2 RELATED-PARTY TRANSACTIONS

On May 16, 2018, the Board of Directors of TIM S.p.A. acknowledged that the grounds for considering Vivendi the entity exercising direction and coordination powers over TIM no longer applied. Furthermore, on June 25, 2018, the Board of Directors of TIM approved amendments to the internal procedure governing transactions with related parties, and updated the relative related-party boundary to reflect the new situation, whereby Vivendi no longer qualifies as the *de facto* controlling entity over TIM. The procedure was most recently updated by the Board of Directors with some improvements on July 24, 2018.

In accordance with Article 5, paragraph 8 of Consob Regulation 17221 of March 12, 2010 concerning "Related party transactions" and the subsequent Consob Resolution 17389 of June 23, 2010, no significant transactions were conducted in 2018, as defined by Article 4, paragraph 1a of the aforementioned regulation, that had a material impact on the financial position or the performance of the TIM Group and TIM S.p.A. in 2018. In addition, there were no changes or developments with respect to the related party transactions described in the 2017 Report on Operations which had a significant effect on the financial position or on the performance of the TIM Group and TIM S.p.A. in 2018.

Related-party transactions, when not dictated by specific laws, were conducted at arm's length. They were performed in compliance with the internal procedure, which sets forth rules designed to ensure the transparency and fairness of the transactions in accordance with Consob Regulation 17221/2010.

The current procedure is available on the website www.telecomitalia.com, under the Group section/Governance System channel.

For further information on related party transactions please see "Note—Related-party transactions and direction and coordination activity" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

Item 8. FINANCIAL INFORMATION

8.1 HISTORICAL FINANCIAL STATEMENTS

See Item 18 and Item 19 for a list of financial statements and other financial information filed with this report.

8.2 LEGAL PROCEEDINGS

We are continuously involved in a variety of disputes, litigations and other legal proceedings with regulators, competitors and other parties.

For further details, please see "Note—Contingent liabilities, other information, commitments and guarantees" to the Consolidated Financial Statements included elsewhere in this Annual Report.

Item 9. LISTING

9.1 TRADING OF TIM ORDINARY SHARES AND SAVINGS SHARES

The principal trading market for the Ordinary Shares and the Savings Shares is Mercato Telematico Azionario or ("**Telematico**") (Ticker: TLIT.MI), an automated screen trading system managed by Borsa Italiana (See "—9.2 Securities Trading in Italy").

Ordinary and Savings Share ADSs, each representing respectively ten Ordinary Shares and ten Savings Shares have been listed on the NYSE (Ticker: TI) since August 4, 2003. JPMorgan Chase Bank is the Company's Depositary issuing ADRs evidencing the Ordinary Share ADSs and the Savings Share ADSs.

At the close of business on April 8, 2019 there were 22,386,080 Ordinary Share ADSs outstanding held by 106 registered holders. One of the registered holders is the Depository Trust Company ("**DTC**") which holds 22,381,819 Ordinary Share ADSs on behalf of beneficial holders.

At the close of business on April 8, 2019 there were 13,806,246 Savings Share ADSs outstanding held by 14 registered holders. One of the registered holders is the Depository Trust Company ("DTC") which holds 13,804,302 Savings Share ADSs on behalf of beneficial holders.

Fluctuations between the Euro and the U.S. dollar will affect the dollar equivalent of the price of the Ordinary Share and the Savings Shares on Telematico and the price of the Ordinary Share ADSs and the Savings Share ADSs on the New York Stock Exchange.

9.2 SECURITIES TRADING IN ITALY

Italian equity securities are traded on the regulated electronic stock market Mercato Telematico Azionario or MTA ("**Telematico**"), which operates under the control of the Commissione Nazionale per le Società e la Borsa (the National Commission for Companies and the Stock Exchange or "**Consob**"), the public authority in charge of regulating the securities markets and all public offerings of securities in Italy in order to ensure the transparency and regularity of trading and protect investors.

Telematico is managed by Borsa Italiana, a joint stock company part of the London Stock Exchange Group, responsible for the organization and management of the Italian stock exchange.

Securities transactions on Telematico are settled on a cash basis. Cash transactions are settled on the second trading day following the trading date. Borsa Italiana publishes information on transactions in each listed security, including the volume traded and the high and low prices of the day. No last price is reported, but an "official price" calculated as a weighted average price of all trades performed during the trading day and a "reference price" as for the closing auction price. The Bank of Italy, in accordance with Consob, regulates the governing of the clearing system that is currently performed in Italy on an exclusive basis by Monte Titoli (a centralized securities clearing system owned by certain major Italian banks and financial institutions).

For the purposes of the automatic control of the regularity of trading on MTA, the following price variation limits shall apply to contracts concluded on shares making up the FTSE MIB, effective July 1, 2013: (i) ± 5.0% (or such other amount established by Borsa Italiana in the "Guide to the Parameters" for trading on the regulated markets organized and managed by Borsa Italiana) with respect to the static price (the static price shall be the previous day's reference price, in the opening auction, or the auction price, in the continuous trading phase); and (ii) ± 3.5% (or such other amount established by Borsa Italiana in the "Guide to the Parameters") with respect to the dynamic price (the price of the last contract concluded during the continuous trading phase). Where the price of a contract that is being concluded exceeds one of the price variation limits referred to above, trading in that security will be automatically suspended and a volatility auction phase begun for a certain period of time. Furthermore Borsa Italiana has the authority to suspend trading in any security in response to extreme price fluctuations or for other reasons. The most liquid shares traded on Telematico, including the TIM ordinary shares, are traded on "Mercato After Hours", an automated screen trading system managed by Borsa Italiana. "Mercato After Hours" operates, from 6.00 p.m. to 8.30 p.m.

The FTSE MIB Index is the primary benchmark index for the Italian equity market. Capturing approximately 80% of the domestic market capitalization, the FTSE MIB Index measures the performance of the 40 most liquid and capitalized Italian shares and seeks to replicate the broad sector weights of the Italian stock market. The index is derived from the universe of stocks trading on Borsa Italiana's Telematico market.

The index is calculated in accordance with the Industry Classification Benchmark ("**ICB**") where main sectors are: Oil & Gas, Constructions & Material, Industrials Goods and Services, Automobiles & Parts, Media, Telecommunications, Utilities, Banks, Technology, Insurance and Personal & Household Goods. Each FTSE MIB constituent is weighted by its free float capital, considering the effective number of shares tradable in the market. Index Constituents weights are capped at 15%; they are reviewed and their weights are rebalanced quarterly (March, June, September and December). The weighting structure can also be changed following extraordinary events (if the capital of a stock increases or other events).

9.3 CLEARANCE AND SETTLEMENT OF TIM SHARES

All financial instruments publicly traded on regulated markets including treasury bonds are dematerialized. Companies that issue financial instruments that are publicly traded on regulated markets must inform Monte Titoli, which opens an account in the name of each company in its register.

Beneficial owners of Ordinary Shares and Savings Shares must hold their interests through specific deposit accounts with any participant having an account with Monte Titoli. The beneficial owners of Ordinary Shares and Savings Shares held with Monte Titoli may transfer their shares, collect dividends, create liens and exercise other rights with respect to those Ordinary Shares and Savings Shares through such accounts and may no longer obtain physical delivery of share certificates in respect of their Ordinary Shares and Savings Shares. All new issues of Ordinary Shares and Savings Shares and all other transactions involving Ordinary Shares and Savings Shares must be settled electronically in book-entry form.

Ordinary Shares and Savings Shares are accepted for clearance through Euroclear and Clearstream. Holders of shares may elect to hold such Ordinary Shares and Savings Shares through Euroclear or Clearstream (outside the United States).

Item 10. ADDITIONAL INFORMATION

10.1 CORPORATE GOVERNANCE

❖ General

The Company's corporate governance system is made up of a series of principles, rules and procedures drawn from applicable laws and regulations and from international best practices. The system, designed and organized bearing in mind the principles formulated by the Committee for Corporate Governance of Borsa Italiana, has been implemented with the adoption of codes, regulations and policies covering the activity of all the organizational and operational components of the Company. Most of these documents are available in English on the Internet at www.telecomitalia.com under "Governance".

According to applicable Italian law, listed issuers shall annually disclose information on their compliance with codes of conduct issued by regulated stock exchange companies (such as the aforementioned Corporate Governance Code by Borsa Italiana) or by trade associations.

❖ Changes in the regulatory framework

No significant change in the regulatory framework took place in 2018 and up to April 8, 2019.

❖ Code of Ethics and Conduct

The Code of Ethics and Conduct (the "**Code of Ethics**") of the TIM Group specifies the principles to be respected in relations with all principal stakeholders of the Company: shareholders, financial markets, customers, local communities and employees.

The Code of Ethics was designed on the basis of generally accepted ethical principles and in accordance with the highest international standards, taking into account the principles of Section 406 of the Sarbanes Oxley Act.

As with all of the Company's corporate governance codes and principles, the Code of Ethics is updated in order to ensure conformity with developments in applicable laws and market regulations, while taking into account national and international best practices. The Code of Ethics was last updated on October 3, 2013.

For further details, please see "Item 16B. Code of Ethics and Conduct".

❖ Board of Directors

The Company's system of corporate governance is centered on the Board of Directors. The Corporate Governance Principles (the "**Principles**") of TIM supplement the applicable rules concerning the tasks and functioning of the Board of Directors and all the directors are required to comply with the Corporate Governance Principles.

Such Principles have been adopted by the Board of Directors and only serve as a self-regulatory measure. The Principles can be amended through resolutions adopted by the Board and promptly disclosed to the market. The present version of the Principles was approved on September 24, 2018. In addition, on September 24, 2018 the Board of Directors adopted a set of rules governing the activity of the Board aand how it works, dealing with issues such as agenda setting, information flows, minutes taking and conflict of interests.

Role and tasks

In accordance with the Italian Stock Exchange Code (by which TIM fully abides) the Board of Directors plays an active role both in the strategic guidance of the Company and in the control of operations, with the power to formulate strategy and responsibility for intervening directly in decisions having the greatest impact on the activity of the Company and the Group. The Board of Directors shall, in particular, have overall responsibility for the internal control and risk management system, including the definition of the nature and level of risk consistent with the specific strategic objectives of the business.

Pursuant to the Company's Principles, the following matters are deemed to have a notable effect on the business of the Company and the Group, and as such are subject to resolutions of the board:

- agreements with competitors that, owing to the subject, the commitments, the conditions and the limits that might be derived from them, have a lasting influence on the freedom of strategic business choices (e.g., partnerships, joint ventures, etc.);
- investments and disinvestments exceeding 250 million euros, and in any event purchases or sales of shareholdings, or businesses or business units that are of strategic significance in the overall framework of the business; transactions that, in their execution or upon their completion, can create commitments and/or purchases and/or sales of this nature and scale;
- the acceptance of loans for amounts exceeding 500 million euros and the granting of loans and guarantees in favor of non-subsidiary companies for amounts exceeding 250 million euros; transactions that, in their execution or upon their completion, can create commitments and/or purchases or sales of this nature and scale;
- any transaction, comprising those not included in the hypotheses set out above, the value of which is equal to 5% or more of the equity or (if more) of the capitalization of the Company at the closure of the last day of trading in the reference period of the most recent periodic accounting document published;
- the listing and delisting of financial instruments issued by the Company or Group companies in regulated markets inside or outside Europe.

Since 2002, the Company has adopted guidelines for carrying out transactions with related parties in order to ensure both procedural and substantial fairness and transparency.

On June 25, 2018, the Board of Directors introduced a set of procedures, which subsequently underwent minor amendments on July 24, 2018. Compared to the preceding versions, the procedures foresee an ad-hoc Board committee (the "Related Parties Committee") to examine and opine on transactions to be carried out with TIM related parties either by TIM or its subsidiaries.

In addition to "related parties", as defined by Consob regulation No. 17221 of March 12, 2010 and IAS 24, these procedures also apply to participants in shareholders' agreements (if any) that involve the candidacy of TIM Directors, in the case of a majority slate. The procedures taxonomy of transactions is fully consistent and aligned with Consob regulation No. 17221/2010, mentioned above.

For information on the subject of related-party transactions, see "Item 7. Major Shareholders and Related-Party Transactions—7.2 Related-Party Transactions".

As part of its function of monitoring and guiding the performance of operations, the Board of Directors assesses the adequacy of the organizational, administrative and accounting structures of the Company on the basis of information made available by management and, with specific reference to the adequacy of the internal control system, in light of the results of the investigations made by the Control and Risk Committee.

The internal control and risk management system is organized and operates according to the principles and criteria set out in the Italian Stock Exchange Code. It is an integral part of the general organizational structure of the Company and the Group, and involves several components that act in a coordinated way according to their respective responsibilities—the responsibility of the Board of Directors to direct and provide strategic oversight, the responsibility of the Executive Directors and management to monitor and manage, the responsibility of the Control and Risk Committee and the Head of the Audit Department to overview and provide support to the Board of Directors, and the supervisory responsibilities of the Board of Statutory Auditors.

The Board of Directors, insofar as it is responsible for the internal control and risk management system, defines the guidelines of the system and verifies its adequacy, effectiveness and proper functioning, so that the main corporate risks (including, among others, operational, compliance-related, economic and financial risks) are properly identified and managed over time.

The establishment and maintenance of the internal control system are assigned to the Executive Directors (currently, the Chief Executive Officer Luigi Gubitosi), and to the Manager in charge of preparing the Company's

financial report for his area of responsibility (such position is held by the Head of Administration, Finance and Control, Piergiorgio Peluso), so as to ensure the overall adequacy of the system and its functionality, in a risk-based perspective, which is also taken into account in determining the agenda for the Board's proceedings.

The Internal Audit Manager, the Group Compliance Officer and the IT & Security Compliance Department Manager report directly to the full Board; the role of link between the Board of Directors and said control structures is presently assigned to non-executive and independent Chairman of the Board of Directors, Fulvio Conti.

The assessment of the performance of operations is based on a continuous flow of information coordinated by the Chairman of the Board of Directors and directed towards the non-executive directors and the members of the Board of Statutory Auditors. Assessments are made, notably, with a comparison of the results achieved with those budgeted during the examination of the financial reports

Meetings

The Board of Directors held 21 meetings in 2018.

As of April 8, 2019, 4 meetings have been held.

When board meetings are to be held, documentation permitting effective participation in the proceedings is provided well in advance, subject to circumstances of the case (as a rule, the Friday preceding the day on which the meeting is to be held, which is normally a Thursday), to enable informed participation in the meetings. When required by the subjects discussed, representatives of the Company management or external consultants are invited to take part, ensuring the necessary technical and professional support.

Appointment of Directors

As noted above, TIM's bylaws (Article 9) provide for the Board of Directors to be elected by the Shareholders' Meeting through a slate system, which is presently mandatory under Italian law.

The slate system is designed to ensure the presence on the Board of Directors of persons drawn from slates presented by minority shareholders. Shareholders who together hold at least 0.5% of the ordinary share capital can put forward slates of candidates. The slates and the accompanying documentation (such as the curricula vitae of the candidates) must be filed at the Company's registered office at least 25 days and made available to the public at least 21 days before the date scheduled for the shareholders' meeting. Consob requires the Company to make the slates and the relevant information available to the public at its registered office, at Borsa Italiana and on its website www.telecomitalia.com. According to TIM's bylaws, slates of candidates can be put forward also by the outgoing Board of Directors. The Board of Directors is elected as follows:

- two thirds of the directors to be elected are chosen from the slate that obtains the simple majority of the votes cast by the shareholders, in the order in which they are listed on the slate; in the event of a fractional number, it is rounded down to the nearest whole number;
- the remaining directors are chosen from the remaining slates. To that end, the votes obtained by the various slates are divided successively by whole numbers from one up to the number of directors to be appointed and the results (quotients) obtained are assigned to the candidates on each slate in the order specified thereon. On the basis of the quotients assigned, the candidates on the various slates are arranged in a single decreasing ranking. Those who have obtained the highest quotients are elected.

At least half of the directors chosen from each slate (with rounding up) must be independent, as per applicable requirements. If necessary, the last names elected from a slate that do not fulfil these requirements will be replaced, in order, by the first of those not elected from the same slate who fulfill said requirements. In the absence of a sufficient number of independent candidates in a slate, the Shareholders' Meeting shall complete the board with the legal majorities, ensuring that the requirement is fulfilled.

All slates that present three or more candidates must have a gender ratio of at least 1:3 among the candidates. If the vote on the slates does not fulfill this diversity requirement in the composition of the Board, the appointment

of the last of the persons elected from the majority slate who are of the more represented gender is forfeited, and they are replaced with the first unelected candidates of the less represented gender on the same slate, in the number needed to ensure the prescribed gender balance. In any case, if the slate mechanism fails, the Shareholders' Meeting retains the right to appoint directors by a subsequent vote, applying the legal majorities, so that the gender diversity requirement is ensured in the composition of the Board.

With respect to the current composition of the Board, see above "Item 6. Directors, Senior Management and Employees". See also: "Risks associated with TIM's ownership chain" under "Item 3. Key Information—3.1 Risk Factors".

Composition

According to the bylaws, the shareholders' meeting decides the exact number of Board members within a minimum and a maximum number (from 7 to 19). Directors may serve for a maximum term of three years, they may be re-elected and there is no statutory age limit for eligibility. There are no provisions in Italian law that set age or shareholding requirements for directors' qualification. There are no provisions in the TIM bylaws relating to the retirement of a director under an age or tenure limit requirement.

If during the term of the Board of Directors, one or more directors cease to hold such position for any reason, the Board of Directors may appoint replacements by a resolution approved by the Board of Auditors. The directors so appointed remain in office until the next Shareholders' Meeting. The replacements finally appointed by the Shareholders' Meeting will remain in office for the same term as the other members already in office at the time of their appointments. In the event of replacement of an independent board member, the Nomination and Remuneration Committee is responsible for proposing a candidate.

Article 3 of the Company's Corporate Governance Principles establishes a cap on the maximum number of positions that TIM directors may hold in management and control bodies of other companies. The general rule is that the position of TIM director is not compatible with directorships or auditorships in more than five companies, other than TIM subsidiaries or affiliates, when such companies:

- are listed and included in the FTSE/MIB index; and/or
- operate prevalently in the financial sector on a public basis; and/or
- engage in banking or insurance.

A TIM directorship is considered incompatible with holding more than three executive positions in companies of the types specified above. The Board of Directors may nonetheless permit exceptions to these rules, subject to such exceptions being made public. If a Director holds office in more than one company belonging to the same Group, only one office held within that Group is taken into account for purposes of calculating the number of offices.

Impact of Shareholders' Agreements on the Nomination of TIM Group's Companies Boards

Effective June 17, 2015, the shareholder agreement in place between the shareholders of Telco S.p.A. was dissolved, as disclosed by public notices in accordance with the applicable regulations. As a result, there are no longer any shareholder agreements for TIM pursuant to Article 122 of Italian Legislative Decree 58/1998.

See "Item 7. Major Shareholders and Related-Party Transactions—Item 7.1.1. Shareholders' Agreements".

Independent Directors

At least two members of the Board of Directors must satisfy the independence requirements set forth by the Consolidated Law on Finance for the members of the Board of Auditors (but see above the independence quota to be met by candidates chosen from each single slate). Moreover, Article 3 of the Corporate Governance Principles incorporates by reference the independence criteria set out in the Borsa Italiana's Corporate Governance Code.

To qualify as independent under Borsa Italiana's Corporate Governance Code and the Company's Corporate Governance Principles, TIM directors must not maintain, nor have recently maintained, directly or indirectly any

business relationships with the issuer or persons linked to the issuer (Group companies, executive directors or members of their families), of such a significance as to influence their autonomous judgment, and should not be in a position to influence the Company as a consequence of the shares they hold or their participation in shareholders' agreements. Specific presumptions are listed in Borsa Italiana's Corporate Governance Code.

The Board of Directors verifies the independence requirements at the first meeting after the appointment of the Board and subsequently once a year. On the basis of the declarations made by the interested parties and verified by the Board of Directors, as of April 8, 2019 12 out of the 15 directors are considered independent, according to the criteria set forth by the Consolidated Law on Finance as well as the criteria set forth by Borsa Italiana Code:, Alfredo Altavilla, Paola Bonomo, Giuseppina Capaldo, Maria Elena Cappello, Massimo Ferrari, Paola Giannotti, Lucia Morselli, Marella Moretti, Dante Roscini, Rocco Sabelli and Michele Valensise. The Board of Directors specifically acknowledged its Chair qualifies as independent as well. The Board of Auditors verified the correct application of the principles adopted by the Board to evaluate the independence of directors. See "Item 16G. Corporate Governance—16G.1. Differences in TIM's Corporate Governance and New York Stock Exchange Corporate Governance Practices".

Executive Directors and Activities of the Board

The authority to grant delegated powers to directors and revoke such mandates is reserved to the Board of Directors, which also establishes their objects, limits, manner of exercise and the intervals—of not more than three months—at which persons with delegated powers must report on their activity, the general results of operations, and the transactions of greatest economic, financial or balance sheet significance concluded by the Company or its subsidiaries.

After its renewal by the Shareholders' Meeting on May 4, 2018, the Board of Directors, in its meeting on May 7, 2017, appointed Fulvio Conti Chairman and Amos Genish as Chief Executive Officer. On November 13, 2018 the Board of Directors revoked all powers conferred to Director Amos Genish, that were provisionally assigned to the Chairman of the Board. On November 18, 2018 the Board of Directors appointed Luigi Gubitosi Chief Executive Officer and General Manager, conferring him executive powers.

The Board of Directors on November 18, 2018 confirmed the pre-existing governance arrangements as follows:

- the Chairman was granted the responsibilities laid down by law, the Company's Bylaws and the Company's Corporate Governance Principles;
- the CEO was conferred all the powers necessary to carry out the Company's activities, with the exception of those reserved by law and the Bylaws to the Board of Directors, and the overview of the Security Officer. This final exception was superseded with a Board resolution on February 21, 2019.

Following his appointment as CEO and General Manager, Luigi Gubitosi qualifies as a (non-independent) Executive Director.

Internal Committees

According to article 13 of the Bylaws, the Board may set up committees from among its members charged with giving advice and making proposals and shall establish their powers and duties. The Corporate Governance Principles provide for four Committees: the Nomination and Remuneration Committee, the Control and Risk Committee, the Related Parties Committee and the Strategy Committee.

With regard to the composition, each of the Control and Risk Committee, the Nomination and Remuneration Committee and the Related Parties Committee are composed only of non-executive; the Strategic Committee is composed of the Chair of the Board of Directors and the Chief Executive Officer (who ensure its coordination with the management of the Group), as well as non-executive directors with expertise in technology, organizational strategies and corporate finance.

Control and Risk Committee

According to the Italian Stock Exchange Code, the Committee shall:

- evaluate together with the person responsible for the preparation of the corporate financial documents, after hearing the external auditors and the Board of statutory auditors, the correct application of the accounting principles and, in the case of groups, their consistency for the purpose of the preparation of the consolidated financial statements;
- express opinions on specific aspects relating to the identification of the main risks for the company;
- review the periodic reports evaluating the internal control and risk management system, as well as those reports of the internal audit function that are particularly significant;
- monitor the independence, adequacy, efficiency and effectiveness of the internal audit function;
- request that the internal audit function review specific operational areas, giving simultaneous notice to the chairman of the Board of Statutory Auditors; and
- report to the Board of Directors, at least every six months, on the occasion of the approval of the annual and half-year financial report, on the activity carried out, as well as on the adequacy of the internal control and risk management system.

In addition, according to TIM's Principles and Control, it shall also:

- exercise a supervisory function on the sustainability of company activities;
- monitor observance of the Company's corporate governance rules, the evolution of rules and best practice in the field of controls, corporate governance and corporate social responsibility, also with a view to proposing updates to the internal practices and rules of the Company and the Group;
- overview financial and non-financial fiscal year disclosure, in view of examination by the full board;
- perform any additional tasks assigned by the Board of Directors.

On August 5, 2014 the Board of Directors approved a set of rules governing the activity of the Committee.

As of April 8, 2019 the Control and Risk Committee was composed of Paola Giannotti (Chairwoman), Massimo Ferrari, Marella Moretti, Lucia Morselli and Michele Valensise. In 2018, it held 21 meetings.

Nomination and Remuneration Committee

According to the Italian Stock Exchange Code, the Committee shall:

- periodically evaluate the adequacy, overall consistency and actual application of the policy for the remuneration of directors and key management personnel, also on the basis of the information provided by the managing directors; it shall formulate proposals to the Board of Directors in that regard;
- submit proposals or issue opinions to the Board of Directors for the remuneration of executive directors and other directors who cover particular offices as well as for the identification of performance objectives related to the variable component of that remuneration; monitor the implementation of decisions adopted by the Board of Directors and verify, in particular, the actual achievement of performance objectives;
- express opinions to the Board of Directors regarding its size and composition and express recommendations with regard to the professional skills necessary within the Board, limit to the accumulation of offices and derogations from the prohibition of competition pursuant to Article 2390 of the Italian Civil Code; and
- submit to the Board of Directors candidates for director's office in case of co-optation, should the replacement of independent directors be necessary.

In addition, according to the Company's Corporate Governance Principles, it shall also:

- oversee the succession plan for Executive Directors, and monitor the updating of the company management replacement lists, prepared by the Executive Directors;

- share with the Executive Directors in advance their decisions in relation to the appointment of managers who report directly to them and the nomination of Chief Executive Officers of the most important subsidiaries;
- establish the procedure and timeframe for the annual evaluation of the Board of Directors;
- propose the criteria for allocating the total annual compensation established by the Shareholders' Meeting for the whole Board of Directors; and
- perform other duties assigned to it by the Board of Directors.

On August 5, 2014, the Board of Directors approved a set of rules governing the activity of the Committee.

As of April 8, 2019 the Nomination and Remuneration Committee was composed of Alfredo Altavilla (Chairman), Paola Bonomo, Giuseppina Capaldo, Rocco Sabelli and Michele Valensise. In 2018 it met 14 times.

For more information concerning the remuneration of directors and top management see "Item 6. Directors, Senior Management and Employees—6.6 Compensation of Directors, Officers and Members of the Board of Auditors".

Strategic Committee

According to the Company's Corporate Governance Principles, the Strategic Committee shall:

- ensure support on matters of strategic importance;
- at the request of the Chairman of the Board of Directors and the Chief Executive Officer, and in coordination with the prerogatives of their respective offices and powers, carry out preliminary assessments on the strategic choices of the Group;
- provide opinions and formulate recommendations on strategic plan proposals to bring to the Board of Directors.

On July 26, 2016, the Board of Directors approved a set of rules governing the activity of the Committee.

As of April 8, 2019, the Strategic Committee was composed of the Chairman of the full Board (Fulvio Conti), the CEO (Luigi Gubitosi) and Directors Massimo Ferrari, Arnaud Roy de Puyfontaine and Rocco Sabelli. In 2018 it met 3 times.

Related Parties Committee

On May 16, 2018, the Board of Directors created the Related Parties Committee, which was charged with the monitoring of transactions with related parties, according to internal procedure.

As of April 8, 2019 the Related Parties Committee was composed of Lucia Morselli (Chairwoman), Giuseppina Capaldo, Maria Elena Cappello, Marella Moretti and Dante Roscini. In 2018 it met 9 times.

Internal Control System

The internal control system is a set of rules, procedures and organizational structures that, through a process of identifying, measuring, managing and monitoring the main risks, allows the sound and fair operation of the company in line with the pre-established objectives. As such this process is aimed at pursuing the values of both procedural and substantial fairness, transparency and accountability, which are considered key factors for managing TIM's business, in compliance with the Code of Conduct and Ethics of the Group and the Company's Corporate Governance Principles. This process, constantly monitored with a view to progressive improvement, is intended to ensure, in particular, the efficiency of company operations and entrepreneurial conduct, its transparency and verifiability, the reliability of information and management and accounting data, and compliance with applicable laws and regulations as well as the safeguarding of company integrity and its assets, in order to prevent fraud against the Company and the financial markets.

The Board of Directors, insofar as it is responsible for the internal control system, sets the guidelines, verifying its adequacy, effectiveness and proper functioning, so that the main company risks (operational, compliance-related, economic and financial) are properly identified and managed over time.

In the exercise of its responsibility for the internal control system the Board benefits from the activities of the Control and Risk Committee, but also of the Head of the Internal Audit Department, a manager who is given an adequate level of independence and means suitable to perform this duty. The Head of the Audit Department assesses the adequacy, full functioning and effectiveness of the control and risk management system and consequently proposes corrective measures in case of anomalies and malfunctions.

In particular, in accordance with the provisions of the Corporate Governance Code of Borsa Italiana, the Head of the Audit Department:

a) verifies, both on a continuous basis and in relation to special needs, in conformity with international standards, the adequacy and effective functioning of the internal control and risk management system, through an audit plan approved by the Board of Directors, based on a structured analysis and ranking of the main risks;

b) is not responsible for any operational area and reports directly to the Board of Directors;

c) has direct access to all information useful for the performance of his or her duties;

d) drafts periodic reports containing information on his or her own activity, and on the risk management process, as well as about compliance with the plans defined to mitigate these risks. Such periodic reports contain an evaluation of the adequacy of the internal control and risk management system;

e) prepares timely reports on particularly significant events;

f) submits the reports referred to in points (d) and (e) above to the Chairs of the Board of Statutory Auditors, Control and Risk Committee as well as to the Chair of the Board of Directors and the Chief Executive Officer in relation to the power assigned to them for Internal Control Issues;

g) tests the reliability of the information systems, including the accounting system, as part of the audit plan; and

h) reports on his or her work to the Director delegated for this purpose, the Control and risk Committee and, through the latter, to the Board of Directors, as well as the Board of Statutory Auditors. In particular, he or she reports on how risk is managed, as well as on compliance with established plans for risk containment, and expresses his or her assessment on the suitability of the internal control system for achieving an acceptable overall risk profile.

The Head of the Audit Department also has a role in ensuring respect of the principles and values expressed in the Code of Ethics and Conduct, by handling reports from employees, collaborators, consultants, and third parties in business relationships with the Group on violations of laws or regulations, of the Code itself, and of internal procedures, as well as irregularities or negligence (including accounting), and promoting the most appropriate resulting initiatives, including the proposal to impose sanctions.

The oversight role of the Head of Internal Audit is directed towards expressing an assessment in terms of reasonable certainty about the capacity of the internal control system to impact on the actual achievement of the objectives assigned to individual company structures (effectiveness profile), taking account of the rational use of resources for their realization (efficiency profile) in the light of the (qualitative/quantitative) risk factors present and the probability of their affecting the achievement of those objectives.

The TIM Group has adopted an Enterprise Risk Management (ERM) process which enables risks to be identified, assessed and managed in a homogeneous way within the Group companies, highlighting potential synergies between the players involved in the assessment of the Internal Control System. There is particular focus on the relationship between the ERM process and the business planning process, particularly in proposing the acceptable level of risk for the Group (Risk Appetite), as well as its distribution in levels of acceptable deviation on the principal corporate objectives (Risk Tolerance).

The process is directed by the ERM Steering Committee. The Steering Committee assures governance of Group risk management, aimed at guaranteeing the operational continuity of the business, monitoring the effectiveness

of the measures adopted. The ERM process is designed to identify potential events that may impact on business activity, to manage the risk within acceptable limits and to provide reasonable assurance of the achievement of the corporate objectives.

The Company's internal control system is completed according to the 231 Organizational Model, which provides a model of organization and management adopted pursuant to Italian Legislative Decree No. 231/2001, and is aimed at preventing violations that can result in liability for the Company. The Organizational Model also constitutes an integral component of the reference compliance program for the application of anti-corruption legislation such as—for example—the FCPA and the UK Bribery Act. In this context, a foreign version of the Organizational Model has been defined for adoption by the non-Italian subsidiaries, also taking account of the possible application of similar regulations at local level.

Monitoring of the functioning and compliance with the model as from May 2012 is performed by the Board of Statutory Auditors (supported in its activities by appropriate offices within the Company) which oversees the operation and observance of the Organizational Model and reports to the Board of Directors the checks it has undertaken and their outcome.

The 231 Organizational Model is subject to continuing improvement. Some revisions are made necessary by changes in the law, while others are proposed when deemed appropriate in the light of the results of the model's application. The amendments are drafted by a managerial committee called Steering Committee 231, briefed by the Board of Statutory Auditors acting as Supervisory Panel and approved by the Board of Directors when of a significant nature.

Board of Auditors

Tasks and role

The Board of Auditors verifies compliance with the law and the Bylaws and verifies adherence to the best administration principles, the adequacy and reliability of corporate structures, internal audit procedures and accounting system, and the adequacy of instructions given by the Company to its subsidiaries. The Board of Auditors must receive timely disclosures, at least quarterly, from the Board of Directors about the company's business and significant transactions performed by the company and its subsidiaries, including related parties transactions. Statutory Auditors must inform Consob of any irregularity they detect in the course of their duties and are required to attend Shareholders' Meetings, Board of Directors meetings and Executive Committee meetings.

In addition to that, under the provisions of Legislative Decree 231/2001, Supervisory Panel functions have been granted to the Board of Auditors.

During 2018, there were 37 meetings of the Board of Statutory Auditors, 6 of which were held jointly with the Control and Risk Committee. In addition, its members participated in the meetings of the Board of Directors and the Board committees and periodically received the reports from the executive directors, as provided in the above mentioned procedure.

Appointment

TIM's Board of Auditors is composed of five regular auditors, and four alternate auditors. The Board of Auditors is appointed by the Shareholders' Meeting through the slate system under the same procedure used for the election of the Board of Directors. Three regular auditors and two alternate auditor are drawn from the so called "majority slate" (that is the slate that obtained the simple majority of the votes cast by the shareholders), two regular auditors and two alternate auditors are taken from the other slates, so called "minority slates".

All slates that present three or more candidates shall have a gender ratio of at least 1:3 among the candidates. If the vote on the slates does not fulfill the diversity requirement in the composition of the Board, the appointment of the last of the persons elected from the majority slate who are of the more represented gender is forfeited, and they are replaced with the first unelected candidates of the less represented gender on the same slate, in the number needed to ensure the prescribed gender balance. In any case, if the slate mechanism fails, the Shareholders' Meeting retains the right to appoint auditors by a subsequent vote, applying the legal majorities, so that the gender diversity requirement is ensured in the composition of the Board.

Pursuant to applicable Italian law, the Chairman of the Board of Auditors is appointed by the shareholders' meeting from among the auditors elected from a "minority slate".

Auditors serve for a three-year term, may be reappointed and may be removed from their office for just cause and upon a resolution approved by the competent court.

Audit Committee

As described above, the Board of Auditors plays a key role in the Company's system of corporate governance.

More specifically, according to Rule 10A-3 under the 1934 Act and NYSE listing standards, the Board of Auditors has been identified to act as TIM's Audit Committee. The Board of Auditors meets the requirements of the general exemption contained in Rule 10A-3(c)(3):

- the Board of Auditors is established pursuant to applicable Italian law and TIM's Bylaws;
- under Italian legal requirements, the Board of Auditors is separate from the Board of Directors;
- the Board of Auditors is not elected by the management of the Company and no executive officer is a member of the Board of Auditors;
- all of the members of the Board of Auditors meet specific independence requirements from the Company and its Group, the management and the auditing firm, as set forth by Italian legal provisions;
- the Board of Auditors, in accordance with and to the extent permitted by Italian law, is responsible for the appointment, retention (via proposal to the shareholders' meeting) and oversight of the work of the Company's external auditors engaged for the purpose of issuing the audit report on the annual financial statements;
- the Board of Auditors is authorized to engage independent counsel and other advisers, as it deems appropriate; and
- the Board of Auditors has adopted a complaints procedure in accordance with Rule 10A-3 of the 1934 Act.

In view of its responsibilities under Italian law and the obligations deriving from US law, the Board of Auditors adopted a complaints procedure for receiving, retaining and treating the "reports" it receives. Such reports can be of the following kinds:

- statements of violations submitted by shareholders concerning matters deemed to be improper;
- complaints by any person, thus including non-shareholders, concerning alleged irregularities, improper facts or, more generally, any problem or issue deemed to merit investigation by the control body;
- complaints specifically regarding accounting, internal accounting controls, or auditing matters; and
- confidential, possibly anonymous submissions of "concerns" by employees of the Company or the Group regarding questionable accounting or auditing matters.

A short description of how such reports are to be submitted to the Board of Auditors/Audit Committee is available on the Company's website under "Governance".

Shareholders' Meetings

Meetings of Ordinary Shareholders

Holders of Ordinary Shares are entitled to attend and vote at ordinary and extraordinary shareholders' meetings. At any Shareholders' Meeting, each holder is entitled to cast one vote for each Ordinary Share held. Votes may be cast personally or by proxy. According to the bylaws, the issuer may designate, for each Shareholders' Meeting, one or more representatives on whom those entitled to vote may confer a proxy free of charge. The person so designated, and the necessary operating instructions, shall be stated in the notice calling the meeting. Holders of Ordinary Shares can also vote by mail or through a proprietary, web based platform, if so specified in the notice of the specific meeting and in the ways specified therein.

Shareholders' Meetings are called by the Company's Board of Directors when required by law or the shareholders or deemed necessary.

Shareholders' Meetings must be convened at least once a year. At these ordinary meetings, holders of Ordinary Shares (i) approve the annual accounts, (ii) appoint/revoke directors and auditors and determine their remuneration, when necessary, (iii) vote on other issues defined in the Bylaws, if any, (iv) authorize the completion of the transactions by the directors, if and when the Bylaws call for such previous authorization, it being understood that directors remain directly responsible for the transactions accomplished, and (v) adopt rules of procedure for the shareholders' meetings (Meeting Regulations).

It is mandatory for issuers to publish their annual report within 120 days of the close of their fiscal year; the approval by the annual general meeting shall follow no later than 180 days after the end of the fiscal year, if the bylaws so provide (and this is the case in TIM).

Extraordinary Shareholders' Meetings may be called to pass upon proposed amendments to the Bylaws, capital increases, mergers, dissolutions, issuance of convertible debentures (which can also be delegated to the Board of Directors), appointment of receivers and similar extraordinary actions.

As a rule, shareholders are informed of all Shareholders' Meetings to be held by publication of a notice at least 30 days (40 days in case of Shareholders' Meetings convened to appoint corporate bodies) before the date fixed for the meeting. The notice must be posted on the issuer's internet site, published in extract form in at least one national daily newspaper, and filed with the Italian Stock Exchange and Consob. TIM's bylaws allow the Shareholders' Meeting to be called either in a single call or with up to two meeting dates for an ordinary Shareholders' Meeting and up to three meeting dates for an extraordinary Shareholders' Meeting. When the meeting is convened in a single call, the quorums of second calls of ordinary Shareholders' Meeting and third calls of extraordinary Shareholders' Meeting, as the case may be, apply.

An ordinary Shareholders' Meeting is duly constituted on first call with the attendance of at least 50% of the outstanding Ordinary Shares, while on second call there is no quorum requirement. In either case, resolutions are approved by holders of the majority of the Ordinary Shares represented at the meeting.

Extraordinary Shareholders' Meetings are duly constituted with the attendance of shareholders representing at least one-half or more than one-third or at least one-fifth of the company's ordinary share capital, on the first call, second call and third call, respectively. The favorable vote of at least two-thirds of the Ordinary Shares represented at the meeting is necessary for the resolution approval.

To attend and vote at any Shareholders' Meeting, holding of shares on the record date (statutorily set at seven trading days before the meeting) is the sole requirement, but to certify that an ad hoc communication by the authorized intermediary must have been received by the Company.

Special arrangements with the Depositary may be required for the beneficial owner of ADRs representing ADSs to attend Shareholders' Meetings and exercise voting rights with respect to underlying Ordinary Shares. See "—10.5 Description of American Depositary Receipts—Voting of Deposited Securities".

Votes cast in the Shareholders' Meeting are open, as the minutes of the meeting are required to evidence how attending shareholders voted.

Shareholders may attend the meeting by proxy using a power of attorney. There is no limit to the number of shareholders any one proxy can represent. A proxy may be appointed only for one single meeting (including, however, the first, second and—in case of extraordinary meetings—third call) and may be substituted by the person expressly indicated in the form or, if the proxy is so authorized, by the substitute the proxy appoints.

Votes by proxy may be solicited and collected for the shareholders' meetings of listed companies. Proxy solicitation provisions allow individuals (and even the issuer), to promote the soliciting of votes by proxy at shareholders' meetings. There is no ownership requirement to this end. Proxy solicitation is subject to specific rules and disclosure requirements set forth by Consob.

In addition, shareholders' associations may collect proxies among their group, without any specific disclosure requirement. In order to facilitate such operation among employee shareholders, the Bylaws provides that special measures will be made available to such shareholders associations in order to facilitate dissemination of information about solicitation and proxy collection operations.

Ordinary Shareholders may also vote by mail. The "vote by mail" cannot be cast by proxy. The system is essentially based on the following principles: (a) the notice calling the shareholders' meetings must specify that shareholders can vote by mail and must describe the procedures they have to follow; (b) shareholders wishing to vote by mail (to be duly entitled to vote through timely communication to the issuer, as described above) must send the company a special form (so called ballot) made available for such purpose by the issuer, which has to comply with specific Consob requirements; (c) votes cast by mail must be delivered to the company at least on the day before the Shareholders' Meeting takes place; and, finally, (d) votes cast by mail remain valid for the second and third calls of the meeting and can be revoked by a written declaration until the day before the meeting, or directly in the meeting through an ad-hoc statement by the interested party.

The Company's bylaws provide that, if the notice of the meeting specifies it and in the ways described therein, Ordinary Shareholders may also vote electronically, in advance of the meeting.

The shareholders' meetings shall be called when requested by shareholders representing at least 5% of a company's share capital. In case the directors or in their place the statutory auditors don't call the Shareholders Meeting, the Court orders with a decree the call of the Shareholders Meeting, after having heard the directors and statutory auditors, if the refusal is unjustified. Shareholders are not allowed to present requests on topics upon which the Shareholders Meeting resolves, pursuant to Italian law, on directors' proposal or on a project basis only.

Shareholders representing at least 2.5% of the share capital may request, within ten days of the publication of the notice convening the meeting, additions to the agenda of the shareholders meeting or presentation to the shareholders meeting of alternative proposals for resolution on items already on the agenda. Added items and alternative proposed resolutions on items already on the agenda, have to be disclosed in the same ways as the notice calling the meeting, at least fifteen days prior to the date scheduled for the shareholders' meeting. Additions to the agenda and/or alternative proposed resolutions cannot be submitted for matters on which the shareholders' meeting is required by law to resolve on proposals put forward by the directors or on the basis of a plan or report by the Board of Directors.

The Shareholders' Meeting on May 6, 2004 adopted a set of Rules of Proceeding, which apply to both Ordinary and Extraordinary meetings, which were amended by the shareholders' Meeting of April 12, 2011. The current version of the Rules is posted on the Company's website under "Governance".

Meetings of Savings Shareholders

Although holders of Savings Shares are not entitled to vote in meetings of holders of Ordinary Shares, they are entitled to attend special meetings of holders of Savings Shares ("Special Meetings") and to appoint a joint representative (the "Joint Representative") to represent them, with respect to the Company.

The Joint Representative, who is appointed by the Special Meeting or, in default, by the Court, is entitled (i) to inspect certain corporate books of the Company, (ii) to attend the Shareholders' Meetings and (iii) to challenge in court the resolutions adopted by such meetings. The Joint Representative is appointed for a maximum three-year term and, according to the Bylaws, is kept informed by the Company regarding corporate events that can affect the price trend of Savings Shares. The Savings Shareholders Meeting held on June 16, 2016 confirmed Mr. Dario Trevisan as joint Representative for a three year period which will expire with the Ordinary Shareholders' Meeting to be convened for approval of the Company's financial statements for the year 2018.

Special Meetings of Savings Shareholders may be called when deemed necessary or upon request by Savings Shareholders representing at least 1% of the outstanding Savings Shares either by the Joint Representative or by the Company's Board of Directors in order to (a) appoint and revoke the Joint Representative, (b) approve the resolutions of the Shareholders' Meetings that may affect the rights of Savings Shares, (c) set up an expense fund for the coverage of costs incurred in protecting rights of the Savings Shareholders, (d) negotiate possible disputes

with the Company; and (e) resolve other issues relating to their position as holders of Savings Shares. To adopt resolutions related to (a), (c) and (e) above, a favorable vote of at least 20% of the Savings Shares is required at Special Meetings held on the first call, a favorable vote of at least 10% is required at Special Meetings held on the second call, and a favorable vote of at least a majority of the Savings Shares present is required at Special Meetings held on the third call. To adopt resolutions related to (b) and (d) above, a favorable vote of at least 20% of the Savings Shares is required at all calls of the Special Meetings.

To attend and vote at any Special Meeting, holding of Savings Shares on the record date (statutorily set at seven trading days before the meeting) is the sole requirement, but to certify that, an ad hoc communication by an authorized intermediary must have been received by the Company. Special arrangements with the Depositary may be required for the beneficial owner of ADRs representing Savings Share ADSs to attend Special Meetings and exercise voting rights with respect to underlying Savings Shares. See ''—10.5 Description of American Depositary Receipts—Voting of Deposited Securities''.

Disclosure

Transparent relations with the financial markets, and the provision of accurate information are paramount for TIM Group.

A specific procedure (posted on the Company's website under ''Governance'') covers the handling—including the public disclosure—of inside information concerning TIM and its listed financial instruments, and is addressed to all the members of the governing bodies, employees and outside consultants of Group companies who have potential access to inside information. It also applies as an instruction to all subsidiaries for the purpose of promptly obtaining the necessary information for timely and correct compliance with public disclosure requirements.

After MAR came into force in July 2016, on February 3, 2017, the Board of Directors approved the existing Procedure. On October 13, 2017, Consob published a document of guidelines for the management of inside information, which contains ''a possible reference prototype for the issuer, in part based on cogent provisions and in part based on Consob directions'', without prescriptive content.
On September 24, 2018 the Board of Directors amended the Procedure taking into account Consob Guidelines.

The updated procedure:

- extends the safeguards to protect the confidentiality of inside information to information that still does not possess the requirements of precision, but which, if it should become precise, would qualify as inside information (so called relevant information);
- provides rules for the identification of relevant and inside information (defining criteria and responsibilities/ processes). Decisions are to be taken with the necessary intervention of the General Counsel and Chief Financial Officer, for those aspects within their respective remits, and with the aim of making the judgement uniform;
- sets out the obligations and prohibitions deriving from access to relevant and inside information, or from the possibility of generating such information (which is a typical characteristic of insiders), emphasising the principle that knowledge and application of the regulation that applies to informed people and/or insiders are the personal responsibility of the respective recipients;
- provides rules for the phase of public disclosure (and delay in disclosure) of inside information, setting out the roles and responsibilities of the various subjects involved;
- describes the ways in which the obligation to draw up lists of people who have access to relevant and inside information may be complied with, envisaging the activation of a specific supplementary section applicable only to those who have permanent access to all the Company information that qualifies as inside information (essentially: the Executive Directors and the departments structurally involved in the phase of establishing the inside nature of the information);

- provides a series of operational references, principles of application and criteria for interpretation on the topic of insider dealing and the closed period;
- makes reference to the legal penalty regime that applies in case of non-compliance with the relevant law, also setting out the contractual responsibility aspects of breaching this regime (and its possible consequences).

The Procedure is available on the Company's website.

With reference to the preparation of the financial statements for 2018, the procedures for the Preparation of TIM 2018 annual report for Italian purposes and TIM 2018 Form 20-F provide for specific mechanisms of upward attestation by the people in charge of the various corporate structures involved in the process of gathering and handling data and drafting the document. This is aimed at giving adequate assurance and support to the senior officers, the Board of Auditors, the Control and Risk Committee and the Board of Directors as a whole in fulfilling their responsibility for oversight of the accuracy and timeliness of required disclosures.

10.2 EXCHANGE CONTROLS AND OTHER LIMITATIONS AFFECTING SECURITY HOLDERS

Foreign Investment and Exchange Control Regulations in Italy

There are no exchange controls in Italy. Residents of Italy may hold foreign currency and foreign securities of any kind, within and outside Italy. Non-residents may invest in Italian securities and may export cash, instruments of credit and securities, in both foreign currency and euro, representing interest, dividends, other asset distributions and the proceeds of dispositions without restriction other than those outlined below. There are no limitations on the right of non-resident or foreign beneficial owners to vote their Shares except as provided for all TIM shareholders by law. See "—10.4 Description of Capital Stock—Limitations on Voting and Shareholdings".

Reporting and record-keeping requirements are contained in Italian legislation which implements an EU Directive regarding the free movement of capital. Such legislation requires that transfers of cash or bearer bank or postal passbooks or bearer instruments in euro or in foreign currency, effected for whatsoever reason between different parties, shall be carried out by means of credit institutions and any other authorized intermediaries when the total amount of the value to be transferred is equal to or more than 1,000.00 euros. However, with respect to some types of cash payment, the threshold has been raised to 3,000.00 euros by the Budget Law for 2016 (Law n. 208 of December 28, 2015). The threshold referred to above also applies when there is reason to believe that several transactions, effected at different times within a certain period of time, constitute part of a single transaction, even if individually below the threshold amount specified. Whenever the execution of such transactions leads to belief that there are irregularities in their performance, such transactions shall be reported in writing to the Italian Central Bank which shall carry out necessary checks. Credit institutions and other intermediaries effecting such transactions on behalf of residents or non-residents of Italy are required to maintain records of such transactions for ten years, which may be inspected at any time by Italian authorities. Non-compliance with the above may result, among others, in administrative fines or, criminal penalties if the transactions fall within a case ruled by the criminal code. Certain additional procedural requirements are imposed for tax reasons. Non-corporate residents (i.e., individuals, non-commercial partnerships and non-commercial entities) which are resident of Italy for tax purposes and which in the course of the fiscal year hold (or are beneficial owners, as defined for anti-money laundering purposes, of) investments abroad or have financial activities abroad must, in certain circumstances, disclose such investments or financial activities regardless of the value of such assets (in contrast, for assets held up to December 31, 2012, the disclosure must be done only if such financial assets held abroad at the end of the fiscal year exceeded 10,000.00 euros). Particularly, non-corporate residents must report on their income tax returns the level of the investments or financial activities held abroad during the tax period, regardless of the total value of the same. This requirement applies even if the taxpayer during the tax period has totally divested such assets. Moreover, compared with the past years, non-corporate residents are no longer (starting from the tax returns to be filed for fiscal year 2013), required to provide details in their income tax returns about transfers to, from, within and between foreign countries in connection with such assets during the fiscal year. No disclosure requirements exist for investments and financial activities under management or administration entrusted to Italian resident intermediaries and for contracts concluded through their intervention, provided that the cash flows and the income derived from such activities and contracts have been subject to Italian withholding or substitute tax by intermediaries themselves. No income tax return is required in respect of foreign investments and foreign income-earning assets that are exempt from income tax or subject to withholding tax in Italy. For corporate residents there is no requirement for such a declaration because their financial statements (on the basis of which their income tax returns are prepared) already contain the information.

There can be no assurance that the present regulatory environment in or outside Italy will endure or that particular policies presently in effect will be maintained, although Italy is required to maintain certain regulations and policies by virtue of its membership in the EU and other international organizations and its adherence to various bilateral and multilateral international agreements.

10.3 DESCRIPTION OF BYLAWS

Object

TIM's corporate purpose is described in Article 3 of the Bylaws and consists of the following activities:

- to install and operate fixed or mobile equipment and installations for the purpose of providing and operating telecommunications services and to carry out the activities directly or indirectly related thereto;
- to hold interests in other businesses falling within the scope of the above stated corporate object or otherwise related thereto; and
- to control and provide the strategic, technical, administrative and financial coordination, overseeing and managing the financial activities of controlled companies and businesses, and carrying out all transactions related thereto.

Directors

There are no provisions in the Bylaws relating to: (1) the power of a director to vote on a proposal in which such director is materially interested, (2) the power of a director to (in the absence of an independent quorum) vote compensation to himself or any member of its body, (3) the power of a director to borrow money from the Company, (4) the retirement of a director under an age limit requirement and (5) the number of shares required for director's qualification.

The Board of Directors grants specific positions to any of its members in compliance with the Bylaws of the company; such positions can include, among others, those of Chairman, Deputy Chairman and Managing Director. According to Italian law the remuneration corresponding to such positions is then defined by the Board of Directors in its discretion, after acknowledging the opinion of the Board of Auditors.

There are no provisions in Italian law that govern the issue of directors borrowing money from the company and that set age or shareholding requirements for director's qualification. According to Italian law, in case of an interest of directors in the transaction to be resolved upon by the Board, there are disclosure requirements, but abstention is not required. Disclosure of the interests of Directors in the transactions at stake is described in detail in the Company's Corporate Governance Principles and the rules of the Board.

10.4 DESCRIPTION OF CAPITAL STOCK

As of April 8, 2019, the subscribed and fully paid-up capital stock was equal to euros 11,677,002,855.10 divided into 15,203,122,583 Ordinary Shares and 6,027,791,699 Savings Shares, all without par value.

The Extraordinary Shareholders' Meeting of May 20, 2015 approved the increase of the Company's share capital, with exclusion of the preferential subscription right pursuant to art. 2441, subsection 5 of the Italian Civil Code, of up to 2,000,000,000 euros (two billion), including any share premium, to service the conversion of the "**€2,000,000,000 1.125 per cent. Equity-Linked bonds due 2022**", through the issuance of ordinary shares of the Company with regular dividend entitlement, without prejudice to the fact that the final terms for subscription of the newly issued shares are established as March 26, 2022 and that if, as of that date, the share capital increase has not been fully subscribed, it will be increased by an amount equal to the subscriptions collected as of that date. No partial shares will be issued or delivered and no cash payment or adjustment will be made in lieu of said parts.

On March 23, 2017, the Board of Directors, by virtue of the powers granted by the Extraordinary Shareholders' Meeting of April 16, 2014, resolved to increase the share capital by the maximum amount of 8,404,245.30 euros, through the issue of up to 15,280,446 new ordinary shares. These shares have a regular dividend entitlement, to be reserved to the assignees of 15,280,446 options under the scope of the 2014-2016 Stock Option Plan, with imputation to capital in the amount of 0.55 euros per share issued, at an issue price respectively of 0.94 euros, 0.99 euros, 1.01 euros or 1.15 euros, depending on when the respective options were assigned to each beneficiary. If not fully subscribed by March 24, 2020, the share capital will be increased by an amount equal to the subscriptions collected as at that date.

Classes of shares

According to Italian law, Savings Shares may not be issued for an amount which, including other preferred shares, if any, exceeds one-half of the Company's share capital.

Pursuant to TIM's Bylaws any reduction in share capital made for the purpose of absorbing losses is applied to the fraction of capital represented by the Ordinary Shares until they have been reduced to zero and only then is the fraction of capital represented by the Savings Shares reduced. If, as a consequence of capital reduction, the Savings Shares exceed half of the Company's share capital, such excess must be eliminated within the following two years.

Form and Transfer

The Dematerialization Decree provides for the dematerialization of financial instruments publicly traded on regulated markets, including shares.

As a result, Ordinary Shares and Savings Shares must be held with Monte Titoli. Most Italian banks, brokers and securities dealers have securities accounts as participants with Monte Titoli, and beneficial owners of Ordinary Shares and Savings Shares may hold their interests through special deposit accounts with any such participant. The beneficial owners of Ordinary Shares and Savings Shares held with Monte Titoli may transfer their Ordinary Shares, collect dividends and exercise other rights with respect to those shares through such accounts. Such shares held by Monte Titoli are transferred between beneficial owners by appropriate instructions being given to the relevant participants associated with Monte Titoli to debit the account with the bank of the vendor and to credit the account with the bank of the purchaser.

Voting rights relating to Ordinary Shares and Savings Shares that have not been deposited with Monte Titoli may be exercised only by depositing them with an authorized intermediary. The Company may act as an intermediary for its own shares.

Each person owning a beneficial interest in Ordinary Shares and Savings Shares held through Euroclear or Clearstream must rely on the procedures of Euroclear or Clearstream, respectively, and of institutions that have accounts with Euroclear or Clearstream to exercise any rights of a holder of shares. Holders may request Euroclear or Clearstream to transfer their Ordinary Shares and Savings Shares to an account of such holder with a

participant of Monte Titoli, in which case such holders may transfer their shares, collect dividends and exercise other shareholder rights through that participant. Any such transfer through that participant is not subject to Italian transfer tax if non-Italian parties are involved. See "—10.6 Taxation".

Dividend Rights

Holders of Savings Shares are entitled each year to a distribution with respect to such year's net income in the amount up to 5% of 0.55 euros per share (so called privilege). If with respect to any year a lesser amount is paid, the entitlement to payment of the shortfall is carried over for two successive years. In the event that dividends are paid to holders of Ordinary Shares, holders of Savings Shares have a preferential right to receive a dividend per share that is higher by 2% of 0.55 euros per share than the dividend per Ordinary Share (so called enhancement).

If the net income is insufficient, the annual shareholders' meeting is allowed to satisfy both the aforementioned preferential rights (privilege and enhancement) by distributing reserves, when available.

Subscription Rights

New Ordinary Shares and/or Savings Shares may be issued pursuant to a resolution of holders of Ordinary Shares at any extraordinary Shareholders' Meeting.

Pursuant to Italian law, shareholders (including holders of Savings Shares) are entitled to subscribe for new issues of Ordinary Shares and/or Savings Shares, debentures convertible into Ordinary Shares and/or Savings Shares and rights to subscribe for Ordinary Shares and/or Savings Shares in proportion to their respective shareholdings.

Nevertheless, subject to certain conditions principally designed to prevent dilution of the rights of shareholders, subscription rights may be waived or limited by resolutions taken by the extraordinary Shareholders' Meeting. On the other hand, according to the Bylaws the subscription rights can be excluded by the extraordinary Shareholders' Meeting in the amount of 10% of the pre-existent share capital with no special quorum or disclosure requirement, on condition that the subscription price is equal to the shares market price and this is confirmed in the proper independent auditors' report.

Shareholders can adopt a resolution, at an extraordinary Shareholders' Meeting, to convert available reserves into additional share capital. In such case, either the fraction of capital represented by all outstanding shares is identically raised or the shares resulting from the increase in share capital are allocated to the shareholders in proportion to their ownership before the increase without further contribution or payment from the shareholder.

Liquidation Rights

Subject to the satisfaction of all other creditors, holders of Ordinary Shares are entitled to a distribution in liquidation.

Holders of Savings Shares and preferred shares, if any, are entitled to a preferred right to distribution from liquidation up to 0.55 euros per share. No liquidation dividend is payable to the holders of other classes of shares until such preferential right has been satisfied in full. Thereafter, in case of surplus assets, holders of all classes of shares rank equally in the distribution of such surplus assets. Shares rank pari passu among themselves in a liquidation.

Purchase of Ordinary Shares or Savings Shares by the Company

The Company may purchase its own Ordinary Shares or Savings Shares subject to certain conditions and limitations. Such purchases must be authorized by a Shareholders' Meeting and made only out of retained earnings or distributable reserves as shown on the most recent financial statements approved by the Shareholders' Meeting. The fraction of capital represented by the Ordinary Shares or Savings Shares purchased by the Company, including the Ordinary Shares or Savings Shares, if any, held by the Company's subsidiaries, may

not exceed 10% of the Company's share capital. The Company may purchase its own Ordinary Shares or Savings Shares:

- by means of a tender offer;
- on regulated markets in accordance with trading methods laid down in the market rules, that do not permit the direct matching of buy orders with predetermined sell orders;
- by means of the purchase and sale of derivative instruments traded on regulated markets that provide for the delivery of the underlying shares, provided the market rules lay down methods for the purchase and sale of such instruments that (i) do not permit the direct matching of buy orders with predetermined sell orders and (ii) ensure the easy participation of investors in the trading of such derivative instruments used for buybacks;
- by granting shareholders, in relation to the shares they hold, a put option to be exercised within a period established by the shareholders' meeting authorizing the share purchase program.

Before entering into transactions aimed at the purchase of its own shares other than by means of a tender offer (which in Italy is governed by specific disclosure requirements), the Company must disclose to the public all the details of the share purchase program.

Ordinary Shares or Savings Shares purchased and held by the Company or one of its subsidiaries may be disposed of only pursuant to a resolution of the Company's or, if applicable, its subsidiary's shareholders' meeting.

As a rule, neither the Company nor any company under its control may vote or subscribe for new Ordinary Shares or Savings Shares of the Company, but the shareholders' meeting may authorize the exercise of subscription rights. If no such authorization is granted, the subscription rights accrue to the other holders so long as such Ordinary Shares or Savings Shares are held by the Company or a company under its control. The Ordinary Shares or the Savings Shares, as long as they are owned by the Company, are not entitled to receive dividends.

As of April 8, 2019, TIM owns 37,672,014 of its own Ordinary Shares, while the subsidiary Telecom Italia Finance S.A. holds another 126,082,374 Ordinary Shares, for a total of 1.08% of capital with voting rights.

Reporting Requirements and Restrictions on Acquisitions of Shares

Pursuant to Italian securities regulations any acquisition or sale of an interest in excess of 3%, 5%, 10%, 15%, 20%, 25%, 30%, 50%, 66.6%, 90% of the voting shares of a listed company, must be notified to the listed company and to Consob within four trading days (defined as days on which Borsa Italiana is open) following the acquisition or sale. Consob must make such information public within three trading days from the notification.

For the purpose of the aforementioned disclosure obligations, shares of which a party is the principal, even if the voting rights are due or assigned to third parties or suspended, are considered as investments. Shares in relation to which a party is assigned or due voting rights are also considered investments where one of the following criteria or a combination of such, is met: (i) voting rights due as pledgee or usufructuary; (ii) voting rights due as depositary or third party account holder, as long as this right can be exercised at discretion; (iii) voting rights due by virtue of power of attorney, as long as the right can be exercised at discretion with no specific instructions by the delegating party; (iv) voting rights due on the basis of an agreement envisaging the provisional, paid transfer of it.

The disclosure obligations envisaged above shall also apply to the treasury shares held directly or via subsidiary companies. In the event of shares subject to security lending or contango transactions, the disclosure obligation is both the lender or the contango payer's and the borrower or the contango broker's. For the same disclosure obligation, shall also be included both the shares owned by nominees, trustees or subsidiary companies and the shares of which the voting rights belong or are assigned to such persons.

Shareholder agreements concerning the voting shares of a listed company must be notified to Consob, published in abridged form in the daily press and filed with the Company Register of the place where the company has its registered office if they provide for duties of consultation before voting, set limits on the transfer or provide for the purchase of the relevant shares, have as their object or effect the exercise of a dominant influence on the

company, aim to encourage or frustrate a takeover bid or equity swap, including commitments relating to non-participation in a takeover bid. The same rule applies when the shareholder agreements concern the shares issued by a non-listed company that controls a listed company. The notification must include the share ownership of all parties filing it.

When listed companies change their share capital, they must notify Consob and Borsa Italiana of the amount of the share capital and the number and classes of shares into which it is divided. Consob and Borsa Italiana must make the information available to the public no later than the day following the notification. The notification shall be made no later than the day following the event causing such modification or the day following the filing of the amended Bylaws.

In accordance with Italian antitrust laws and regulations, the Antitrust Authority is required to prohibit acquisitions of sole or joint control over a company that would create or strengthen a dominant position in the domestic market or a significant part thereof. However, if the acquiring party and the company to be acquired operate in more than one Member State of the EU and exceed certain revenue thresholds, the antitrust approval of the acquisition falls within the exclusive jurisdiction of the European Commission. See "Item 4. Information on the TIM Group—4.3 Regulation".

Limitations on Voting and Shareholdings

There are no limitations imposed by Italian law or by the Bylaws of TIM on the rights of non-residents of Italy or foreign persons to hold or vote the Ordinary Shares other than those limitations resulting from the special powers of the State.

10.5 DESCRIPTION OF AMERICAN DEPOSITARY RECEIPTS

Following the Merger, Olivetti as the surviving company changed its name to "TIM S.p.A.", succeeded to the Exchange Act registration of Old TIM and became subject to the foreign private issuer reporting requirements of the Exchange Act. TIM completed the listing of its Ordinary Share American Depositary Shares and Savings Share American Depositary Shares on the New York Stock Exchange. TIM has entered into two Deposit Agreements among the Company, JPMorgan Chase Bank, as Depositary, and the registered Holders from time to time of ADRs issued thereunder. The first such Deposit Agreement, dated as of November 16, 2017, provides for the deposit of Ordinary Shares in registered form, with no par value and the issuance of the Ordinary Share ADSs; the second such Deposit Agreement, also dated as of November 16, 2017 provides for the deposit of Savings Shares in registered form, with no par value and the issuance of the Savings Share ADSs. Because these agreements are otherwise substantially identical, such agreements (including all exhibits and amendments thereto) are referred to herein as the "Deposit Agreement", deposited Shares as well as deposited Savings Shares are referred to as "Shares", and the Ordinary Share ADSs or Savings Share ADSs, as the case may be, are referred to as the "ADSs". The following is a summary of the material provisions of the Deposit Agreement. This summary does not purport to be complete and is qualified in its entirety by reference to the Deposit Agreement. Copies of the Deposit Agreement are available for inspection at the principal office of the Depositary in New York (the "Principal New York Office"), which is presently located at 4 New York Plaza, New York, New York 10004. Terms used herein and not otherwise defined shall have the respective meanings set forth in the Deposit Agreement.

ADRs evidencing ADSs are issuable by the Depositary pursuant to the terms of the Deposit Agreement. Each ADS represents, as of the date hereof, the right to receive 10 Ordinary Shares (in the case of each Ordinary Share ADS) or 10 Savings Shares (in the case of each Savings Share ADS) in each case deposited under the Deposit Agreement (together with any additional Ordinary Shares deposited thereunder and all other securities, property and cash received and held thereunder at any time in respect of or in lieu of such deposited Ordinary Shares, the "Deposited Securities") with the Custodian, currently the Milan office of BNP Paribas (together with any successor or successors thereto, the "Custodian"). An ADR may evidence any number of ADSs. Only persons in whose names ADRs are registered on the books of the Depositary will be treated by the Depositary and the Company as Holders.

Deposit, Issuance, Transfer and Withdrawal

In connection with the deposit of Shares in accordance with the Deposit Agreement, the Depositary or the Custodian may require the following in a form satisfactory to it: (a) a written order directing the Depositary to issue to, or upon the written order of, the person or persons designated in such order a Direct Registration ADR or ADRs evidencing the number of ADSs representing such deposited Shares (a "Delivery Order"); (b) proper endorsements or duly executed instruments of transfer in respect of such deposited Shares; (c) instruments assigning to the Depositary, the Custodian or a nominee of either any distribution on or in respect of such deposited Shares or indemnity therefor; and (d) proxies entitling the Depositary or the Custodian to vote such deposited Shares. As soon as practicable after the Custodian receives Deposited Securities pursuant to any such deposit or pursuant to the terms and conditions of the Deposit Agreement of the form of ADR, the Custodian shall present such Deposited Securities for registration of transfer into the name of the Depositary, the Custodian or a nominee of either, to the extent such registration is practicable, at the cost and expense of the person making such deposit (or for whose benefit such deposit is made) and shall obtain evidence satisfactory to it of such registration. Deposited Securities shall be held by the Custodian for the account and to the order of the Depositary for the benefit of Holders of ADRs (to the extent not prohibited by law) at such place or places and in such manner as the Depositary shall determine. Deposited Securities may be delivered by the Custodian to any person only under the circumstances expressly contemplated in the Deposit Agreement. To the extent that the provisions of or governing the Shares make delivery of certificates therefor impracticable, Shares may be deposited by such delivery thereof as the Depositary or the Custodian may reasonably accept, including, without limitation, by causing them to be credited to an account maintained by the Custodian for such purpose with the Company or an accredited intermediary, such as a bank, acting as a registrar for the Shares, together with delivery of the documents, payments and Delivery Order referred to in the Deposit Agreement to the Custodian or the Depositary.

After any such deposit of Shares, the Custodian shall notify the Depositary of such deposit and of the information contained in any related Delivery Order by letter, first class airmail postage prepaid, or, at the request, risk and

expense of the person making the deposit, by SWIFT, cable, telex or facsimile transmission. After receiving such notice from the Custodian, the Depositary, subject to the Deposit Agreement, shall properly issue at the Transfer Office, to or upon the order of any person named in such notice, an ADR or ADRs registered as requested and evidencing the aggregate ADSs to which such person is entitled.

Subject to the other provisions of the Deposit Agreement, the Depositary may so issue ADRs for delivery at the Transfer Office (as defined in the Deposit Agreement) only against deposit of: (a) Shares in a form satisfactory to the Custodian; (b) rights to receive Shares from the Company or any registrar, transfer agent, clearing agent or other entity recording Share ownership or transactions; or (c) in accordance with the next paragraph.

In its capacity as Depositary, the Depositary shall not lend Deposited Securities; provided, however, that, unless requested by the Company to cease doing so during periods necessary in order to enable compliance with applicable law, the Depositary may issue ADSs prior to the receipt of Shares (each such transaction a "Pre-Release"). The Depositary may receive ADSs in lieu of Shares (which ADSs will promptly be canceled by the Depositary upon receipt by the Depositary). Each such Pre-Release will be subject to a written agreement whereby the person or entity (the "Applicant") to whom ADSs are to be delivered (a) represents that at the time of the Pre-Release the Applicant or its customer owns the Shares that are to be delivered by the Applicant under such Pre-Release, (b) agrees to indicate the Depositary as owner of such Shares in its records and to hold such Shares or ADSs in trust for the Depositary until such Shares or ADSs are delivered to the Depositary or the Custodian, (c) unconditionally guarantees to deliver to the Depositary or the Custodian, as applicable, such Shares, and (d) agrees to any additional restrictions or requirements that the Depositary deems appropriate. Each such Pre-Release will be at all times fully collateralized with cash, U.S. government securities or such other collateral as the Depositary deems appropriate, terminable by the Depositary on not more than five (5) business days' notice and subject to such further indemnities and credit regulations as the Depositary deems appropriate. The Depositary will normally limit the number of ADSs involved in such Pre-Release at any one time to thirty percent (30%) of the ADSs outstanding (without giving effect to Pre-Released ADSs outstanding), provided, however, that the Depositary reserves the right to change or disregard such limit from time to time as it deems appropriate. The Depositary may also set limits with respect to the number of ADSs involved in Pre-Release with any one person on a case-by-case basis as it deems appropriate. The Depositary may retain for its own account any compensation received by it in conjunction with the foregoing. Collateral provided in connection with Pre-Release transactions, but not the earnings thereon, shall be held for the benefit of the Holders (other than the Applicant).

At the request, risk and expense of the person depositing Shares, the Depositary may accept deposits for forwarding to the Custodian and may deliver ADRs at a place other than its office. Shares or evidence of rights to receive Shares may be deposited through (x) electronic transfer of such Shares to the account maintained by the Custodian for such purpose at Monte Titoli S.p.A., (y) evidence satisfactory to the Custodian of irrevocable instructions to cause such Shares to be transferred to such account or (z) delivery of the certificates representing such Shares. If use of the Monte Titoli book-entry system in connection with the Shares is discontinued at any time for any reason, the Company shall make other book-entry arrangements (if any) that it determines, after consultation with the Depositary, are reasonable.

Every person depositing Shares under the Deposit Agreement represents and warrants that (a) such Shares and the certificates therefor are duly authorized, validly issued and outstanding, fully paid, non-assessable and legally obtained by such person (b) all pre-emptive and comparable rights, if any, with respect to such Shares have been validly waived or exercised, (c) the person making such deposit is duly authorized so to do, (d) the Shares presented for deposit are free and clear of any lien, encumbrance, security interest, charge, mortgage or adverse claim and (e) such Shares (A) are not "restricted securities" as such term is defined in Rule 144 under the Securities Act of 1933 ("Restricted Securities") unless at the time of deposit the requirements of paragraphs (c), (e), (f) and (h) of Rule 144 shall not apply and such Shares may be freely transferred and may otherwise be offered and sold freely in the United States or (B) have been registered under the Securities Act of 1933. To the extent the person depositing Shares is an "affiliate" of the Company as such term is defined in Rule 144, the person also represents and warrants that upon the sale of the ADSs, all of the provisions of Rule 144 which enable the Shares to be freely sold (in the form of ADSs) will be fully complied with and, as a result thereof, all of the ADSs issued in respect of such Shares will not be on the sale thereof, Restricted Securities. Such representations and warranties shall survive the deposit and withdrawal of Shares and the issuance and cancellation of ADSs in respect thereof and the transfer of such ADSs. The Depositary may refuse to accept for such deposit any Shares

identified by the Company in order to facilitate compliance with the requirements of the Securities Act of 1933 or the Rules made thereunder. The Depositary will not knowingly accept for deposit under the Deposit Agreement any Shares required to be registered under the Securities Act of 1933 and not so registered.

Subject to the terms and conditions of the Deposit Agreement, upon surrender of (i) a certificated ADR in a form satisfactory to the Depositary at the Transfer Office or (ii) proper instructions and documentation in the case of a Direct Registration ADR, the Holder is entitled to delivery at, or to the extent in dematerialized form from, the Custodian's office of the Deposited Securities at the time represented by the ADSs evidenced by the ADR, provided that the Depositary may deliver Shares prior to the receipt of ADSs for withdrawal of Deposited Securities, including ADSs which were issued as per above but for which Shares may not have been received (until such ADSs are actually deposited, "Pre-released Shares") only if all the conditions in the Deposit Agreement related to such Pre-Release are satisfied). At the request, risk and expense of the Holder hereof, the Depositary may deliver such Deposited Securities at such other place as may have been requested by the Holder. Notwithstanding any other provision of the Deposit Agreement or the ADR, the withdrawal of Deposited Securities may be restricted only for the reasons set forth in General Instruction I.A.(1) of Form F-6 (as such instructions may be amended from time to time) under the Securities Act of 1933.

Distributions on Deposited Securities

Subject to the terms and conditions of the Deposit Agreement, to the extent practicable, the Depositary will distribute to each Holder entitled thereto on the record date set by the Depositary therefor at such Holder's address shown on the ADR Register, in proportion to the number of Deposited Securities (on which the following distributions on Deposited Securities are received by the Custodian) represented by ADSs evidenced by such Holder's ADRs: (a) Cash. Any U.S. dollars available to the Depositary resulting from a cash dividend or other cash distribution or the net proceeds of sales of any other distribution or portion thereof authorized in this paragraph ("Cash"), on an averaged or other practicable basis, subject to (i) appropriate adjustments for taxes withheld, (ii) such distribution being impermissible or impracticable with respect to certain Holders, and (iii) deduction of the Depositary's and/or its agents' fees and expenses in (1) converting any foreign currency to U.S. dollars by sale or in such other manner as the Depositary may determine to the extent that it determines that such conversion may be made on a reasonable basis, (2) transferring foreign currency or U.S. dollars to the United States by such means as the Depositary may determine to the extent that it determines that such transfer may be made on a reasonable basis, (3) obtaining any approval or license of any governmental authority required for such conversion or transfer, which is obtainable at a reasonable cost and within a reasonable time and (4) making any sale by public or private means in any commercially reasonable manner. (b) Shares. (i) Additional ADRs evidencing whole ADSs representing any Shares available to the Depositary resulting from a dividend or free distribution on Deposited Securities consisting of Shares (a "Share Distribution") and (ii) U.S. dollars available to it resulting from the net proceeds of sales of Shares received in a Share Distribution, which Shares would give rise to fractional ADSs if additional ADRs were issued therefor, as in the case of Cash. (c) Rights. (i) Warrants or other instruments in the discretion of the Depositary representing rights to acquire additional ADRs in respect of any rights to subscribe for additional Shares or rights of any nature available to the Depositary as a result of a distribution on Deposited Securities ("Rights"), to the extent that the Company timely furnishes to the Depositary evidence satisfactory to the Depositary that the Depositary may lawfully distribute the same (the Company has no obligation to so furnish such evidence), or (ii) to the extent the Company does not so furnish such evidence and sales of Rights are practicable, any U.S. dollars available to the Depositary from the net proceeds of sales of Rights as in the case of Cash, or (iii) to the extent the Company does not so furnish such evidence and such sales cannot practicably be accomplished by reason of the non-transferability of the Rights, limited markets therefor, their short duration or otherwise, nothing (and any Rights may lapse). (d) Other Distributions. (i) Securities or property available to the Depositary resulting from any distribution on Deposited Securities other than Cash, Share Distributions and Rights ("Other Distributions"), by any means that the Depositary may deem equitable and practicable, or (ii) to the extent the Depositary deems distribution of such securities or property not to be equitable and practicable, any U.S. dollars available to the Depositary from the net proceeds of sales of Other Distributions as in the case of Cash. The Depositary reserves the right to utilize a division, branch or affiliate of JPMorgan Chase Bank, N.A. to direct, manage and/or execute any public and/or private sale of securities hereunder. Such division, branch and/or affiliate may charge the Depositary a fee in connection with such sales, which fee is considered an expense of the Depositary contemplated above and/or according to the terms and conditions of the Deposit Agreement. Any U.S. dollars available will be distributed by checks drawn on a bank in

the United States for whole dollars and cents. Fractional cents will be withheld without liability and dealt with by the Depositary in accordance with its then current practices. All purchases and sales of securities will be handled by the Depositary in accordance with its then current policies, which are currently set forth in the "Depositary Receipt Sale and Purchase of Security" section of https://www.adr.com/Investors/FindOutAboutDRs, the location and contents of which the Depositary shall be solely responsible for.

Disclosure of Interests

To the extent that the provisions of or governing any Deposited Securities may require disclosure of or impose limits on beneficial or other ownership of Deposited Securities, other Shares and other securities and may provide for blocking transfer, voting or other rights to enforce such disclosure or limits, Holders and all persons holding ADRs agree to comply with all such disclosure requirements and ownership limitations and to comply with any reasonable Company instructions in respect thereof. The Company reserves the right to instruct Holders to deliver their ADSs for cancellation and withdrawal of the Deposited Securities so as to permit the Company to deal directly with the Holder thereof as a holder of Shares and Holders agree to comply with such instructions. The Depositary agrees to cooperate with the Company in its efforts to inform Holders of the Company's exercise of its rights under this paragraph and agrees to consult with, and provide reasonable assistance without risk, liability or expense on the part of the Depositary, to the Company on the manner or manners in which it may enforce such rights with respect to any Holder.

Record Dates

The Depositary may, after consultation with the Company if practicable, fix a record date (which, to the extent applicable, shall be as near as practicable to any corresponding record date set by the Company) for the determination of the Holders who shall be responsible for the fee assessed by the Depositary for administration of the ADR program and for any expenses according to the terms and conditions of the Deposit Agreement as well as for the determination of the Holders who shall be entitled to receive any distribution on or in respect of Deposited Securities, to give instructions for the exercise of any voting rights, to receive any notice or to act in respect of other matters and only such Holders shall be so entitled or obligated.

Voting of Deposited Securities

Subject to the next sentence, as soon as practicable after receipt of notice of any meeting at which the holders of Shares are entitled to vote, or of solicitation of consents or proxies from holders of Shares or other Deposited Securities, the Depositary shall fix the ADS record date in accordance with the terms and conditions of the Deposit Agreement in respect of such meeting or solicitation of consent or proxy. The Depositary shall, if requested by the Company in writing in a timely manner (the Depositary having no obligation to take any further action if the request shall not have been received by the Depositary at least 30 days prior to the date of such vote or meeting) and at the Company's expense and provided no legal prohibitions exist, distribute to Holders a notice stating (a) such information as is contained in such notice and any solicitation materials, (b) that each Holder on the record date set by the Depositary therefor will, subject to any applicable provisions of Italian law and of the Company's Certificate of Incorporation and By-laws, be entitled to instruct the Depositary as to the exercise of the voting rights, if any, pertaining to the Deposited Securities represented by the ADSs evidenced by such Holder's ADRs; (c) if applicable, a statement as to the manner in which such Holders may request a certificate for such meeting attesting that beneficial ownership of the related Shares is in the name of the Holders and therefore enabling them to exercise voting rights with respect to the Shares represented by their ADSs without the use of Voting Proxy Cards as defined hereinafter (the "Certificate") (d) if applicable, a proxy card (the "Voting Proxy Card") pursuant to which such Holder may appoint the Depositary (with power of substitution) as his or her proxy to vote at such meeting in accordance with the directions set out in such Voting Proxy Card as hereinafter described, and (e) such other information, including any such modification to the foregoing procedures as agreed between the Depositary and the Company.

The Voting Proxy Card will, among other things, require the Holder to set forth its name and the number of such Holder's ADSs, authorize the Depositary (or the broker, custodian or other nominee holding such Holders' ADRs) to prohibit any transfers of Shares evidenced by such ADRs for a period of time (i) as set forth by applicable provisions (if any) of Italian laws and regulations and/or applicable provisions (if any) of the Company's

Certificate of Incorporation and By-laws and in any case (ii) beginning from the issuance of the Certificate for such meeting and ending at the end of the day on the date upon which such meeting is held with a quorum (the "Blocked Period") and authorize the Depositary to request the Custodian to cause the name and address of such Holder to be registered in the Share register of the Company during such Blocked Period and to issue or cause to be issued a Certificate for such meeting during such Blocked Period in respect of the number of Shares represented by such Holder's ADSs.

Upon actual receipt by the ADR department of the Depositary of instructions of a Holder on such record date in the manner and on or before the time established by the Depositary for such purpose, the Depositary shall endeavor insofar as practicable and permitted under any applicable provisions of Italian law and the Company's Certificate of Incorporation and By-laws to vote or cause to be voted the Shares represented by the ADSs evidenced by such Holder's ADRs in accordance with any nondiscretionary instructions set forth in such Voting Proxy Card. Voting instructions will not be deemed received until such time as the ADR department responsible for proxies and voting has received such instructions notwithstanding that such instructions may have been physically received by JPMorgan Chase Bank, N.A., as Depositary, prior to such time.

A Holder desiring to exercise voting rights with respect to the Shares represented by its ADSs without the use of Voting Proxy Cards may do so by (A) depositing its ADRs in a blocked account with the Depositary until the completion of such meeting and (B) instructing the Depositary to (x) furnish the Custodian with the name and address of such Holder, the number of ADSs represented by ADRs held by such Holder and any other information required in accordance with Italian law or the Company's Certificate of Incorporation and By-laws, (y) notify the Custodian of such deposit, and (z) instruct the Custodian to issue a Certificate for such meeting, and to give notice to the Company of such Holder's intention to vote the Shares underlying its ADRs. By giving the instructions set forth under point (B) above, Holders will be deemed to have authorized the Custodian to prohibit any transfers of the related Shares for the Blocked Period. Each Holder understands and agrees that a precondition for the issue of the Certificate for a specific meeting by the Custodian may be that beneficial ownership of the related Shares has been in the name of the Holder for a specific number of days prior to the date of the meeting according to applicable provisions (if any) of Italian laws and regulations and/or applicable provisions (if any) of the Company's Certificate of Incorporation and By-laws.

Under Italian law, shareholders at shareholders' meetings may modify the resolutions presented for their approval by the Board of Directors. In such case Holders who have given prior instructions to vote on such resolutions, and whose instructions do not provide for the case of amendments or additions to such resolutions, will be deemed to have elected to have abstained from voting on any such revised resolution.

Notwithstanding the foregoing, the Depositary is instructed to also allow Holders to electronically or telephonically provide the information required and/or sought in a Voting Proxy Card and to electronically or telephonically provide voting instructions with respect to any meeting of shareholders. Any such electronic and/or telephonic instructions shall be valid if timely received by the Depositary.

The Depositary will not itself exercise any voting discretion in respect of any Deposited Securities.

There can be no assurance that Holders generally or any Holder in particular will receive the notice described above with sufficient time to enable the Holder to return voting instructions to the Depositary in a timely manner.

Notwithstanding anything contained in the Deposit Agreement or any ADR, the Depositary may, to the extent not prohibited by law or regulations, or by the requirements of the stock exchange on which the ADSs are listed, in lieu of distribution of the materials provided to the Depositary in connection with any meeting of, or solicitation of consents or proxies from, holders of Deposited Securities, distribute to the Holders a notice that provides Holders with, or otherwise publicizes to Holders, instructions on how to retrieve such materials or receive such materials upon request (i.e., by reference to a website containing the materials for retrieval or a contact for requesting copies of the materials). Holders are requested to forward their voting instructions as soon as possible and in any event prior to the deadline established from time to time.

Inspection of Transfer Books

The Depositary or its agent will keep, at a designated transfer office (the "Transfer Office"), (a) a register (the "ADR Register") for the registration, registration of transfer, combination and split-up of ADRs, and, in the case of

Direct Registration ADRs, shall include the Direct Registration System, which at all reasonable times will be open for inspection by Holders and the Company for the purpose of communicating with Holders in the interest of the business of the Company or a matter relating to the Deposit Agreement.

Reports and Available Information

The Deposit Agreement, the provisions of or governing Deposited Securities and any written communications from the Company, which are both received by the Custodian or its nominee as a holder of Deposited Securities and made generally available to the holders of Deposited Securities, are available for inspection by Holders at the offices of the Depositary and the Custodian and at the Transfer Office. The Depositary will distribute copies of such communications (or English translations or summaries thereof) to Holders when furnished by the Company. The Company is subject to the periodic reporting requirements of the Securities Exchange Act of 1934 and accordingly files certain reports with the United States Securities and Exchange Commission (the "Commission"). Such reports and other information may be inspected and copied through the Commission's EDGAR system or at public reference facilities maintained by the Commission located at the date hereof at 100 F Street, NE, Washington, DC 20549.

On or before the first date on which the Company makes any communication available to holders of Deposited Securities or any securities regulatory authority or stock exchange, by publication or otherwise, the Company shall transmit to the Depositary a copy thereof in English or with an English translation or summary. The Company has delivered to the Depositary, the Custodian and any Transfer Office, a copy of all provisions (other than copies of Italian laws and/or regulations) of or governing the Shares and any other Deposited Securities issued by the Company and, promptly upon any change thereto, the Company shall deliver to the Depositary, the Custodian and any Transfer Office, a copy (in English or with an English translation) of such provisions (other than copies of Italian laws and/or regulations) as so changed. The Depositary and its agents may rely upon the Company's delivery of all such communications, information and provisions for all purposes of the Deposit Agreement and the Depositary shall have no liability for the accuracy or completeness of any thereof.

Changes Affecting Deposited Securities

Subject to the terms and conditions of the Deposit Agreement, the Depositary may, in its discretion, and shall if reasonably requested by the Company, amend the ADR or distribute additional or amended ADRs (with or without calling the ADR for exchange) or cash, securities or property on the record date set by the Depositary therefor to reflect any change in par value, split-up, consolidation, cancellation or other reclassification of Deposited Securities, any Share Distribution or Other Distribution not distributed to Holders or any cash, securities or property available to the Depositary in respect of Deposited Securities from (and the Depositary is hereby authorized to surrender any Deposited Securities to any person and, irrespective of whether such Deposited Securities are surrendered or otherwise cancelled by operation of law, rule, regulation or otherwise, to sell by public or private sale any property received in connection with) any recapitalization, reorganization, merger, consolidation, liquidation, receivership, bankruptcy or sale of all or substantially all the assets of the Company, and to the extent the Depositary does not so amend the ADR or make a distribution to Holders to reflect any of the foregoing, or the net proceeds thereof, whatever cash, securities or property results from any of the foregoing shall constitute Deposited Securities and each ADS evidenced by the ADR shall automatically represent its pro rata interest in the Deposited Securities as then constituted. Promptly upon the occurrence of any of the aforementioned changes affecting Deposited Securities, the Company shall notify the Depositary in writing of such occurrence and as soon as practicable after receipt of such notice from the Company, may instruct the Depositary to give notice thereof, at the Company's expense, to Holders in accordance with the provisions hereof. Upon receipt of such instruction, the Depositary shall give notice to the Holders in accordance with the terms thereof, as soon as reasonably practicable.

Amendment and Termination of Deposit Agreement

Subject to the terms and conditions of the Deposit Agreement, the ADRs and the Deposit Agreement may be amended by the Company and the Depositary, provided that any amendment that imposes or increases any fees or charges (other than stock transfer or other taxes and other governmental charges, transfer or registration fees, SWIFT, cable, telex or facsimile transmission costs, delivery costs or other such expenses), or that shall otherwise

prejudice any substantial existing right of Holders, shall become effective 30 days after notice of such amendment shall have been given to the Holders. Every Holder of an ADR at the time any amendment to the Deposit Agreement so becomes effective shall be deemed, by continuing to hold such ADR, to consent and agree to such amendment and to be bound by the Deposit Agreement and the ADRs as amended thereby. In no event shall any amendment impair the right of the Holder of any ADR to surrender such ADR and receive the Deposited Securities represented thereby, except in order to comply with mandatory provisions of applicable law. Any amendments or supplements which (i) are reasonably necessary (as agreed by the Company and the Depositary) in order for (a) the ADSs to be registered on Form F-6 under the Securities Act of 1933 or (b) the ADSs or Shares to be traded solely in electronic book-entry form and (ii) do not in either such case impose or increase any fees or charges to be borne by Holders, shall be deemed not to prejudice any substantial rights of Holders. Notwithstanding the foregoing, if any governmental body or regulatory body should adopt new laws, rules or regulations which would require amendment or supplement of the Deposit Agreement or the form of ADR to ensure compliance therewith, the Company and the Depositary may amend or supplement the Deposit Agreement and the ADR at any time in accordance with such changed laws, rules or regulations. Such amendment or supplement to the Deposit Agreement in such circumstances may become effective before a notice of such amendment or supplement is given to Holders or within any other period of time as required for compliance. Notice of any amendment to the Deposit Agreement or form of ADRs shall not need to describe in detail the specific amendments effectuated thereby, and failure to describe the specific amendments in any such notice shall not render such notice invalid, provided, however, that, in each such case, the notice given to the Holders identifies a means for Holders to retrieve or receive the text of such amendment (i.e., upon retrieval from the U.S. Securities and Exchange Commission's, the Depositary's or the Company's website or upon request from the Depositary).

The Depositary may, and shall at the written direction of the Company, terminate the Deposit Agreement and the ADR by mailing notice of such termination to the Holders at least 30 days prior to the date fixed in such notice for such termination; provided, however, if the Depositary shall have resigned or shall have been removed as Depositary hereunder, notice of such termination by the Depositary shall not be provided to Holders unless a successor depositary shall not be operating hereunder within 60 days of the date of such resignation or the Company's written notice of removal. After the date so fixed for termination, the Depositary and its agents will perform no further acts under the Deposit Agreement and the ADR, except to receive and hold (or sell) distributions on Deposited Securities and deliver Deposited Securities being withdrawn. As soon as practicable after the expiration of six months from the date so fixed for termination, the Depositary shall sell the Deposited Securities and shall thereafter (as long as it may lawfully do so) hold in a segregated account the net proceeds of such sales, together with any other cash then held by it under the Deposit Agreement, without liability for interest, in trust for the pro rata benefit of the Holders of ADRs not theretofore surrendered. After making such sale, the Depositary shall be discharged from all obligations in respect of the Deposit Agreement and the ADR, except to account for such net proceeds and other cash. After the date so fixed for termination, the Company shall be discharged from all obligations under the Deposit Agreement except for its obligations to the Depositary and its agents.

Appointment.

Each Holder and each person holding an interest in ADSs, upon acceptance of any ADSs (or any interest therein) issued in accordance with the terms and conditions of the Deposit Agreement shall be deemed for all purposes to (a) be a party to and bound by the terms of the Deposit Agreement and the applicable ADR(s), and (b) appoint the Depositary its attorney-in-fact, with full power to delegate, to act on its behalf and to take any and all actions contemplated in the Deposit Agreement and the applicable ADR(s), to adopt any and all procedures necessary to comply with applicable law and to take such action as the Depositary in its sole discretion may deem necessary or appropriate to carry out the purposes of the Deposit Agreement and the applicable ADR(s), the taking of such actions to be the conclusive determinant of the necessity and appropriateness thereof.

Charges of Depositary

The Depositary may charge, and collect from, (i) each person to whom ADSs are issued, including, without limitation, issuances against deposits of Shares, issuances in respect of Share Distributions, Rights and Other Distributions (as such terms are defined in the Deposit Agreement), issuances pursuant to a stock dividend or stock split declared by the Company, or issuances pursuant to a merger, exchange of securities or any other

transaction or event affecting the ADSs or the Deposited Securities, and (ii) each person surrendering ADSs for withdrawal of Deposited Securities or whose ADSs are cancelled or reduced for any other reason, U.S.$5.00 for each 100 ADSs (or portion thereof) issued, delivered, reduced, cancelled or surrendered (as the case may be). The Depositary may sell (by public or private sale) sufficient securities and property received in respect of Share Distributions, Rights and Other Distributions prior to such deposit to pay such charge. The following additional charges shall be incurred by the Holders, by any party depositing or withdrawing Shares or by any party surrendering ADSs and/or to whom ADSs are issued (including, without limitation, issuances pursuant to a stock dividend or stock split declared by the Company or an exchange of stock regarding the ADSs or the Deposited Securities or a distribution of ADSs pursuant to the terms and conditions of the Deposit Agreement), whichever is applicable (i) a fee of U.S.$0.05 or less per ADS for any Cash distribution made pursuant to the Deposit Agreement, (ii) a fee of U.S.$1.50 per ADR or ADRs for transfers made pursuant to the Deposit Agreement, (iii) a fee for the distribution or sale of securities pursuant to the Deposit Agreement, such fee being in an amount equal to the fee for the execution and delivery of ADSs referred to above which would have been charged as a result of the deposit of such securities (for purposes of this paragraph treating all such securities as if they were Shares) but which securities or the net cash proceeds from the sale thereof are instead distributed by the Depositary to Holders entitled thereto, (iv) an aggregate fee of U.S.$0.05 per ADS per calendar year (or portion thereof) for services performed by the Depositary in administering the ADRs (which fee may be charged on a periodic basis during each calendar year and shall be assessed against Holders as of the record date or record dates set by the Depositary during each calendar year and shall be payable at the sole discretion of the Depositary by billing such Holders or by deducting such charge from one or more cash dividends or other cash distributions), and (v) a fee for the reimbursement of such fees, charges and expenses as are incurred by the Depositary and/or any of its agents (including, without limitation, the Custodian and expenses incurred on behalf of Holders in connection with compliance with foreign exchange control regulations or any law or regulation relating to foreign investment) in connection with the servicing of the Shares or other Deposited Securities, the sale of securities (including, without limitation, Deposited Securities), the delivery of Deposited Securities or otherwise in connection with the Depositary's or its Custodian's compliance with applicable law, rule or regulation (which fees and charges shall be assessed on a proportionate basis against Holders as of the record date or dates set by the Depositary and shall be payable at the sole discretion of the Depositary by billing such Holders or by deducting such charge from one or more cash dividends or other cash distributions). The Company will pay all other charges and expenses of the Depositary and any agent of the Depositary (except the Custodian) pursuant to agreements from time to time between the Company and the Depositary, except (i) stock transfer or other taxes and other governmental charges (which are payable by Holders or persons depositing Shares), (ii) SWIFT, cable, telex and facsimile transmission and delivery charges incurred at the request of persons depositing, or Holders delivering Shares, ADRs or Deposited Securities (which are payable by such persons or Holders), (iii) transfer or registration fees for the registration or transfer of Deposited Securities on any applicable register in connection with the deposit or withdrawal of Deposited Securities (which are payable by persons depositing Shares or Holders withdrawing Deposited Securities; there are no such fees in respect of the Shares as of the date of the Deposit Agreement), and (iv) in connection with the conversion of foreign currency into U.S. dollars, JPMorgan Chase Bank, N.A. ("JPMorgan") shall deduct out of such foreign currency the fees, expenses and other charges charged by it and/or its agent (which may be a division, branch or affiliate) so appointed in connection with such conversion. JPMorgan and/or its agent may act as principal for such conversion of foreign currency. Such charges may at any time and from time to time be changed by agreement between the Company and the Depositary. For further details see https://www.adr.com

The Depositary may make available to the Company a set amount or a portion of the Depositary fees charged in respect of the ADR program or otherwise upon such terms and conditions as the Company and the Depositary may agree from time to time.

The right of the Depositary to receive payment of fees, charges and expenses as provided above shall survive the termination of the Deposit Agreement. As to any Depositary, upon the resignation or removal of such Depositary, such right shall extend for those fees, charges and expenses incurred prior to the effectiveness of such resignation or removal.

Taxes

If any tax or other governmental charges (including any penalties and/or interest) shall become payable by or on behalf of the Custodian or the Depositary with respect to the ADR, any Deposited Securities represented by the ADSs evidenced hereby or any distribution thereon, such tax or other governmental charge shall be paid by the

Holder to the Depositary and by holding or having held an ADR the Holder and all prior Holders, jointly and severally, agree to indemnify, defend and save harmless each of the Depositary and its agents in respect thereof. The Depositary may refuse to effect any registration, registration of transfer, split-up or combination hereof or, subject to the terms and conditions of the Deposit Agreement, any withdrawal of such Deposited Securities until such payment is made. The Depositary may also deduct from any distributions on or in respect of Deposited Securities, or may sell by public or private sale for the account of the Holder hereof any part or all of such Deposited Securities (after attempting by reasonable means to notify the Holder hereof prior to such sale), and may apply such deduction or the proceeds of any such sale in payment of such tax or other governmental charge, the Holder remaining liable for any deficiency, and shall reduce the number of ADSs evidenced hereby to reflect any such sales of Shares. In connection with any distribution to Holders, the Company or its agents will remit to the appropriate governmental authority or agency all amounts (if any) required to be withheld and owing to such authority or agency by the Company or its agents; and the Depositary and the Custodian will remit to the appropriate governmental authority or agency all amounts (if any) required to be withheld and owing to such authority or agency by the Depositary or the Custodian. The Depositary will forward to the Company such information from its records as the Company may reasonably request to enable the Company to file any necessary reports with governmental authorities or agencies. If the Depositary determines that any distribution in property other than cash (including Shares or rights) on Deposited Securities is subject to any tax that the Depositary or the Custodian is obligated to withhold, the Depositary may dispose of all or a portion of such property in such amounts and in such manner as the Depositary deems necessary and practicable to pay such taxes, by public or private sale, and the Depositary shall distribute the net proceeds of any such sale or the balance of any such property after deduction of such taxes to the Holders entitled thereto. Each Holder of an ADR or an interest therein agrees to indemnify the Depositary, the Company, the Custodian and any of their respective officers, directors, employees, agents and affiliates against, and hold each of them harmless from, any claims by any governmental authority with respect to taxes, additions to tax, penalties or interest arising out of any refund of taxes, reduced rate of withholding at source or other tax benefit obtained.

See ''—10.6 Taxation'' for additional information on tax issues relating to ADRs.

Exoneration

The Depositary, the Company, their agents and each of them shall: (a) incur no liability to Holders or beneficial owners of ADSs (i) if any present or future law, rule, regulation, fiat, order or decree of the United States, the Republic of Italy or any other country or jurisdiction, or of any governmental or regulatory authority or any securities exchange or market or automated quotation system, the provisions of or governing any Deposited Securities, any present or future provision of the Company's charter, any act of God, war, terrorism, nationalization, expropriation, currency restrictions, work stoppage, strike, civil unrest, revolutions, rebellions, explosions, computer failure or circumstance beyond its direct and immediate control shall prevent or delay, or shall cause any of them to be subject to any civil or criminal penalty in connection with, any act which the Deposit Agreement or the ADR provides shall be done or performed by it or them (including, without limitation, voting pursuant to the terms and conditions of the Deposit Agreement), or (ii) by reason of any exercise or failure to exercise any discretion given it in the Deposit Agreement or the ADR (including, without limitation, any failure to determine that any distribution or action may be lawful or reasonably practicable); (b) assume no liability to Holders or beneficial owners of ADSs except to perform its obligations to the extent they are specifically set forth in the ADR and the Deposit Agreement without gross negligence or willful misconduct; (c) in the case of the Depositary and its agents, be under no obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any Deposited Securities or the ADR; (d) in the case of the Company and its agents hereunder be under no obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any Deposited Securities or the ADR, which in its opinion may involve it in expense or liability, unless indemnity satisfactory to it against all expense (including fees and disbursements of counsel) and liability be furnished as often as may be required; or (e) not be liable to Holders or beneficial owners of ADSs for any action or inaction by it in reliance upon the advice of or information from legal counsel, accountants, any person presenting Shares for deposit, any Holder, or any other person believed by it to be competent to give such advice or information. The Depositary shall not be liable for the acts or omissions made by, or the insolvency of, any securities depository, clearing agency or settlement system. The Depositary shall not be responsible for, and shall incur no liability in connection with or arising from, the insolvency of any Custodian that is not a branch or affiliate of JPMorgan Chase Bank, N.A. The Depositary shall not have any liability for the price received in connection with any sale of

securities, the timing thereof or any delay in action or omission to act nor shall it be responsible for any error or delay in action, omission to act, default or negligence on the part of the party so retained in connection with any such sale or proposed sale. Notwithstanding anything to the contrary contained in the Deposit Agreement (including the ADRs), subject to the penultimate sentence of this paragraph, the Depositary shall not be responsible for, and shall incur no liability in connection with or arising from, any act or omission to act on the part of the Custodian except to the extent that the Custodian has (i) committed fraud or willful misconduct in the provision of custodial services to the Depositary or (ii) failed to use reasonable care in the provision of custodial services to the Depositary as determined in accordance with the standards prevailing in the jurisdiction in which the Custodian is located. The Depositary, its agents and the Company may rely and shall be protected in acting upon any written notice, request, direction, instruction or document believed by them to be genuine and to have been signed, presented or given by the proper party or parties. The Depositary shall be under no obligation to inform Holders or any other holders of an interest in any ADSs about the requirements of Italian law, rules or regulations or any changes therein or thereto. The Depositary and its agents will not be responsible for any failure to carry out any instructions to vote any of the Deposited Securities, for the manner in which any such vote is cast or for the effect of any such vote. The Depositary may rely upon instructions from the Company or its counsel in respect of any approval or license required for any currency conversion, transfer or distribution. The Depositary and its agents may own and deal in any class of securities of the Company and its affiliates and in ADRs. Notwithstanding anything to the contrary set forth in the Deposit Agreement or an ADR, the Depositary and its agents may fully respond to any and all demands or requests for information maintained by or on its behalf in connection with the Deposit Agreement, any Holder or Holders, any ADR or ADRs or otherwise related hereto or thereto to the extent such information is requested or required by or pursuant to any lawful authority, including without limitation laws, rules, regulations, administrative or judicial process, banking, securities or other regulators. None of the Depositary, the Custodian or the Company shall be liable for the failure by any Holder or beneficial owner to obtain the benefits of credits or refunds of non-U.S. tax paid against such Holder's or beneficial owner's income tax liability. The Depositary and the Company shall not incur any liability for any tax or tax consequences that may be incurred by Holders or beneficial owners on account of their ownership or disposition of the ADRs or ADSs. The Depositary shall not incur any liability for the content of any information submitted to it by or on behalf of the Company for distribution to the Holders or for any inaccuracy of any translation thereof, for any investment risk associated with acquiring an interest in the Deposited Securities, for the validity or worth of the Deposited Securities, for the credit-worthiness of any third party, for allowing any rights to lapse upon the terms of the Deposit Agreement or for the failure or timeliness of any notice from the Company. The Depositary shall not be liable for any acts or omissions made by a successor depositary. By holding an ADS or an interest therein, Holders and owners of ADSs each irrevocably agree that any legal suit, action or proceeding against or involving the Company or the Depositary, arising out of or based upon the Deposit Agreement, the ADSs or the transactions contemplated herein, therein or hereby, may only be instituted in a state or federal court in New York, New York, and by holding an ADS or an interest therein each irrevocably waives any objection which it may now or hereafter have to the laying of venue of any such proceeding, and irrevocably submits to the exclusive jurisdiction of such courts in any such suit, action or proceeding. The Company has agreed to indemnify the Depositary and its agents under certain circumstances and the Depositary has agreed to indemnify the Company under certain circumstances. Neither the Company, the Depositary nor any of their respective agents shall be liable to Holders or beneficial owners of interests in ADSs for any indirect, special, punitive or consequential damages (including, without limitation, legal fees and expenses) or lost profits, in each case of any form incurred by any person or entity, whether or not foreseeable and regardless of the type of action in which such a claim may be brought. No disclaimer of liability under the Securities Act of 1933 is intended by any provision hereof.

Governing Law

The Deposit Agreement is governed by and shall be construed in accordance with the laws of the State of New York.

10.6 TAXATION

Unless otherwise indicated herein, for purposes of the following discussion regarding taxation, the Ordinary Shares and the Savings Shares are collectively referred to as the "TIM Shares".

10.6.1 ITALIAN TAXATION

The following is a summary of material Italian tax consequences of the ownership and disposition of Ordinary Shares, Savings Shares or ADSs as at the date hereof. It does not purport to be a complete analysis of all potential tax matters relevant to a decision to hold Ordinary Shares, Savings Shares or ADSs. Therefore, this summary is provided for general information only and it is based upon Italian tax laws in effect as of the date of this document. Consequently, be aware that such laws may change anytime in the course of the year. You should consult your own tax advisors as to matters of Italian tax law. For purposes of Italian law and the Italian - US Income Tax Convention which went into effect on January 1, 2010 (the "**Treaty**"), holders of ADSs which are evidenced by ADRs will be treated as holders of the underlying Ordinary Shares or Savings Shares, as the case may be.

Taxation of non-resident taxpayers. Introduction

As a general principle, non-resident taxpayers are liable for Italian income tax with respect to income that is treated as arising in Italy, unless such income is subject to a final withholding tax deducted by the payer of the income. Specifically, by means of a new measure that applies to dividends received starting on January 1, 2018 and to capital gains realized starting on January 1, 2019, dividends and capital gains derived from the holding and disposal of both substantial and non-substantial participations (as defined below) by individual Italian tax resident, not holding such participations in a business capacity but as an investment, are taxed through a final withholding tax or substitute tax of 26 percent (previously, such treatment only applied with respect to the holding and disposal of non-substantial participations). However, the previous regime (only affecting resident shareholders) applies to dividends paid out of profits realized until the fiscal year ongoing on December 31, 2017 (i.e., 2017 for taxpayers whose fiscal year coincides with the calendar year) and declared between January 1, 2018 and December 31, 2022.

Dividends taxation

Dividends paid either to holders of Ordinary Shares and applicable ADSs or to holders of Savings Shares and applicable ADSs, who are not Italian tax residents and do not have a permanent establishment in Italy to which dividends are connected are subject to a final withholding tax at a rate of 26 percent (the rate was increased from 20 to 26 percent by Law Decree No. 66 of April 24, 2014, converted with amendments into Law No. 89 of June 23, 2014 and applies on dividends paid from July 1, 2014 onwards, even in case the relevant distribution resolution was adopted before the above mentioned date). The obligation to withhold such tax is imposed on the resident company or the authorized intermediary paying the dividends, as applicable.

All shares of Italian listed companies have to be registered in a centralized deposit system managed by Monte Titoli. With respect to dividends paid in connection with shares held in the centralized deposit system, such as TIM Shares, instead of the withholding tax mentioned above, a substitute income tax will apply at the same tax rate as the above-mentioned withholding tax. This substitute income tax is levied by, and under the responsibility of, the Italian authorized intermediaries participating in the Monte Titoli system and with whom the securities are deposited and also by non-Italian authorized intermediaries participating, directly or through a non-Italian centralized deposit system, in the Monte Titoli system. With respect to any dividends paid within the above mentioned centralized deposit system, TIM assumes no responsibility for the withholding of tax at the source (and application of tax treaties, as discussed below) as such responsibility lies entirely on the Italian authorized intermediaries with whom the securities are deposited.

Non-resident holders of Ordinary Shares and applicable ADSs have the right to recover within 48 months from the date of payment of the Italian substitute income tax, up to eleven- twenty-sixth (11/26) of such 26 percent substitute tax on their dividend income, upon providing adequate evidence (by documentation issued by the tax authorities of their country of residence) that they have paid a corresponding final income tax in such home country on the same dividend income.

These refunds are normally subject to extensive delays. In addition, these refunds are an alternative to seeking any relief from double taxation under an income tax treaty, including the Treaty.

U.S. resident beneficial owners of Shares (either Ordinary or Savings Shares) and related ADSs may be entitled to a reduced tax rate on their dividends under the Treaty. Where: (i) a U.S. resident owner qualifies for the benefits of the Treaty and meets all the requirements of the Treaty provision dealing with limitation on benefits, (ii) the U.S. resident owner is the actual beneficial owner of the dividend income, (iii) the dividends paid are not connected with a permanent establishment in Italy through which the U.S. resident owner carries on a business or with a fixed base in Italy through which the U.S. resident owner performs independent personal services, the Treaty generally provides that Italian taxes cannot exceed 15 percent of the gross amount of the dividend (this 15 percent rate may be reduced to 5 percent when the beneficial owner of the dividends is a U.S. company which has owned at least 25 percent of the voting stock of the company paying the dividends for a 12-month period ending on the date the dividend is declared).

The withholding agent (i.e., the authorized intermediary/Depositary) may apply the Treaty rate directly if the recipient, as the beneficial owner of TIM Shares or ADSs, provides, before the dividend is paid (in accordance with the relevant instructions about timing and modalities generally provided for by the Depositary), the intermediary with which the shares are deposited and which participates in the Monte Titoli system with the following documentation:

- a residency certificate that must be validated by the tax authorities in the holder's country of residence. In the case of a U.S. holder, a certification (Form 6166) issued by the U.S. Internal Revenue Service that states that the beneficial owner is a U.S. resident for tax purposes. The certification is valid until March 31 of the year following the submission; and
- a declaration by the recipient containing all the data identifying such person as the beneficial owner and establishing the existence of all the conditions necessary for the application of the Treaty, including a statement that it does not have a permanent establishment in Italy to which the dividend payment is attributable.

The processing of requests for certification by the U.S. Internal Revenue Service may take a substantial period of time. Accordingly, in order to be eligible for the procedure described below, eligible ADS holders should begin the process of obtaining Form 6166 as soon as possible after receiving instructions from the Depositary on how to claim the reduced rate provided by the Treaty.

The Depositary's instructions, which will be sent to all ADS holders before the dividend payment date, will specify certain deadlines for delivering to the Depositary any documentation required to obtain the reduced rate provided by the Treaty, including the certification that the eligible ADS holders must obtain from the U.S. Internal Revenue Service. In the case of ADSs held through a broker or other financial intermediary, the required documentation should be delivered to such financial intermediary for transmission to the Depositary. In all other cases, the eligible ADS holders should deliver the required documentation directly to the Depositary.

If the holder of TIM Shares or ADSs does not provide the relevant documentation in order to obtain the reduced rate provided by the Treaty at the time the dividend is paid, the holder must pay the substitute income tax at the rate set forth by Italian domestic law. In this case, the recipient can apply for a refund equal to the difference between the Italian domestic rate and the Treaty rate directly from the Italian tax authorities by filing the relevant documentation within 48 months from the date of payment. Extensive delays have been encountered by U.S. residents seeking payments directly from the Italian authorities.

In the case of dividends paid to a U.S. partnership, the reduction of the tax rate under the Treaty is only available to the extent such dividends are subject to U.S. tax in the hands of the partners.

Capital Gains Tax

Capital gains tax ("**CGT**") is levied on capital gains realized by non-residents from the disposal of shares in companies resident in Italy for tax purposes even if those shares are held outside of Italy. However, capital gains realized by non-resident holders on the sale of non-substantial participations (as defined below) in companies whose shares or ADSs are listed on a stock exchange and resident in Italy for tax purposes (as is the case for TIM) are not subject to CGT.

A "substantial participation" consists of securities (except for Savings Shares and applicable ADSs) that: (i) entitle the holder to exercise more than 2 percent of the voting rights of a company with shares listed on a stock exchange (TIM is such a company) in the ordinary meeting of the shareholders; or (ii) represent more than 5 percent of the share capital of a company with shares listed on a stock exchange (TIM is such a company). A "non-substantial participation" is any shareholding that does not meet the above-mentioned requirements to be qualified as a "substantial participation".

The relevant percentage is calculated taking into account the shareholdings sold during the prior 12-month period (the period starting from the day on which the taxpayer holds shareholding higher than the above mentioned percentages of 2 or 5 percent).

Pursuant to the Treaty, a U.S. resident will not be subject to Italian CGT on a sale of substantial participations unless the TIM Shares or ADSs form part of the business property of a permanent establishment of the holder in Italy or pertain to a fixed base available to a holder in Italy for the purpose of performing independent personal services. U.S. residents who sell TIM Shares or ADSs may be required to produce appropriate documentation establishing that the above-mentioned conditions of non-taxability pursuant to the Treaty provisions have been satisfied if CGT would otherwise be applicable.

Inheritance and Gift Tax

The transfers of any valuable asset (including Ordinary Shares, Savings Shares and ADSs) as a result of death or donation (or other transfers for no consideration) and the creation of liens on such assets for a specific purpose are taxed as follows:

(i) transfers in favor of the spouse and of direct descendants or ascendants are subject to an inheritance and gift tax applied at a rate of 4 percent on the value of the inheritance or the gift exceeding 1,000,000 euros (per beneficiary);

(ii) transfers in favor of brothers and sisters are subject to an inheritance and gift tax applied at a rate of 6 percent on the value of the inheritance or the gift exceeding 100,000 euros (per beneficiary);

(iii) transfers in favor of all other relatives up to the fourth degree or relatives-in-law up to the third degree, are subject to an inheritance and gift tax applied at a rate of 6 percent on the entire value of the inheritance or the gift;

(iv) any other transfer is subject to an inheritance and gift tax applied at a rate of 8 percent on the entire value of the inheritance or the gift.

If the beneficiary of any such transfer is a disabled individual, whose handicap is recognized pursuant to Law No. 104 of February 5, 1992, the tax is applied only on the value of the assets (including the Shares) received in excess of 1,500,000 euros at the rates illustrated above, depending on the type of relationship existing between the deceased or donor and the beneficiary.

With respect to listed shares, the value for inheritance and gift tax purposes is the average stock exchange price of the last quarter preceding the date of the succession or of the gift (increased by the interest accrued during the meanwhile). With respect to unlisted shares, the value is determined proportionally to the equity resulting from the last approved balance sheet of the company.

For non-residents, Italian Inheritance and Gift tax applied only with respect to assets and rights existing in the Italian territory. Shares in companies that have their registered office, the seat of the administration or the main object in Italy are considered as existing in the Italian territory.

No gift tax convention is currently in place between Italy and the United States.

Registration Tax

Transfer of shares, bonds and similar securities based on contracts executed in Italy are subject to registration tax as follows: (i) public deeds and notarized deeds are subject to a lump-sum registration tax of 200 euros at the time of the execution; (ii) private deeds are subject to registration tax, at the same lump-sum, only in case of use or voluntary registration. This tax is also payable where a contract executed abroad or with different formalities is presented to an Italian registration office or an Italian court.

Stamp taxes and duties

Stamp duties ("imposta di bollo") are levied on certain documents, contracts and registers (e.g., bank checks, statements of accounts, bills, written contracts, judicial acts, accountancy books), as regulated by DPR 642/1972. The tax is usually a nominal lump sum and, in exceptional cases, it may be levied as a percentage of the value mentioned in the document.

Any report to clients by an Italian resident intermediary with reference to financial instruments and products (including those held abroad through an Italian resident intermediary) is subject to an annual stamp duty of 0.2 percent (0.15 percent in 2013). The rate is applied on the market value or—where no market value is available—on the nominal value or the redemption amount of any financial product or financial instruments (including the TIM shares or ADSs). The provision setting a minimum threshold of 34.20 euros was abolished on December 31, 2013. For taxpayers other than individuals, this stamp duty is capped at 14,000 euros (in 2013, the cap was 4,500 euros).

It is assumed that intermediaries send periodic communications to clients at least once a year, even if the Italian intermediary is not required to prepare and send such communications. In this case, stamp duties must be applied at December 31 of each year and, in any case, at the expiration of the relationship between intermediary and client.

Tax on financial transactions

1. Shares and other equity instrument transactions

The Italian Financial Transactions TAX ("**FTT**") was introduced by Law No. 228 as of December 24, 2012. Detailed regulations of such tax were provided by the Decree of the Ministry of Economy and Finance as of February 21, 2013. In accordance with the relevant provisions, starting from March 1, 2013 the FTT is levied to:

a) transfers of ownership of shares and certain participating financial instruments which have been issued by companies that have their registered office in Italy, regardless of the place of residence of the parties involved and of the place where the contract has been executed; and

b) transfers of ownership of securities (such as ADSs) representing equity investments referred to in point a) above, irrespective of the country of residence of the issuer of these securities.

Therefore, the relevant tax criterion for applying FTT is the place of residence (i.e., the place of the registered office) of the issuer of the shares and of the participating financial instruments. In contrast, the place of the execution of the relevant transfers and the residence of the contractual parties involved is not relevant in defining taxed transactions. Accordingly, transfers performed outside Italian territory through foreign intermediaries, are also subject to tax in Italy, to the extent they refer to shares, or participating financial instruments issued by companies registered in Italy (or securities representing such equity investments). So, with reference to the transfer of ADSs, the place of residence of the Depositary is not relevant. Instead the country of residence of TIM, as issuer of the shares, is relevant.

The taxable base is the net daily balance of the transactions calculated on the same security and executed by the same persons, or the consideration paid.

The tax is determined proportionally by applying a percentage rate to the value of the counter value of the transaction that varies in relation to the market on which the transaction is carried out. The standard FTT rate is:

– 0.20 percent (exceptionally increased to 0.22 percent only for 2013) for over-the-counter transactions; and

– 0.10 percent (exceptionally increased to 0.12 percent only for 2013) for transactions executed on regulated markets or in multilateral trading facilities established in (i) an EU Member State, (ii) in an EEA country that is included in the white list, or (iii) subject to certain conditions, in a non-EEA jurisdiction that is included in the white list.

The FTT is due by the person to whom the ownership of the shares, the financial participating instruments and the securities representing equity investments (such as ADSs) is transferred. The tax is

either (i) levied by the financial intermediary (e.g., banks, trusts, investment companies) or the notary directly involved in the execution of the transfer, if any, or (ii) paid directly by the transferee, by the 16th day of the month following the execution of the respective transaction. Where more than one intermediary are involved in the execution of the transfer, the tax must be levied by the intermediary who receives the order to execute the transaction directly from the transferee.

Non-Italian intermediaries and other non-resident persons involved in the transaction must comply with the obligations deriving from the application of such tax through their Italian permanent establishment, if any; in absence of a permanent establishment in Italy, non-residents may appoint a tax representative in order to comply with all the relevant tax obligations. In cases other than the above (i.e., where an intermediary is not interposed in a taxable transaction), the obligations, including the payment of the tax, must be fulfilled directly by the non-resident transferee.

Non-residents involved in a financial transaction are deemed to be the purchasers or the final counterparty of the execution order, if established in a State which does not fulfill the exchange of information requirements. In order to identify the uncooperative countries for FTT purposes, reference shall be made to ITA Protocol No. 84383 of May 30, 2016 (as subsequently modified and integrated) that conversely provides a list of States that fulfill the exchange information requirements.

On December 15, 2017, ITA issued Protocol No. 294475, approving the new FTT return form and related instructions, to be used from January 1, 2018. The FTT return must be electronically filed by March 31 of each year (with respect to FTT paid over the previous year), but no return needs to be filed if the FTT paid does not exceed 50 euros. Non-residents may file the FTT return through their Italian permanent establishment or through an appointed tax representative. Non-residents without a permanent establishment in Italy and who have not appointed a tax representative in Italy but directly identified in Italy (i.e., non-resident who applied for the assignment of an Italian Tax Identification Number) as an alternative to the electronic submission, can file the FTT declaration by shipment carried out from abroad, using registered letter or other equivalent means, provided that the shipping date can be determined with certainty from them.[11] The return form and related instructions are available on the ITA website ("www.agenziaentrate.gov.it" or "www.finanze.gov.it").

10.6.2 United States Federal Income Taxation

The following is a description of material U.S. federal income tax consequences to the U.S. Holders described below of owning and disposing of TIM Shares or ADSs representing TIM Shares, but it does not purport to be a comprehensive description of all tax considerations that may be relevant to a particular person's decision to hold the securities. This discussion applies only to a U.S. Holder that holds TIM Shares or ADSs as capital assets for U.S. federal income tax purposes. In addition, it does not describe all of the tax consequences that may be relevant in light of the U.S. Holder's particular circumstances, including alternative minimum tax consequences and the potential application of the provisions of the Internal Revenue Code of 1986, as amended (the "**Code**") known as the Medicare contribution tax, and tax consequences applicable to U.S. Holders subject to special treatment, such as:

- certain financial institutions;
- dealers or traders in securities who use a mark-to-market method of tax accounting;
- persons holding TIM Shares or ADSs as part of a hedging transaction, straddle, wash sale, conversion transaction or integrated transaction or persons entering into a constructive sale with respect to the TIM Shares or ADSs;
- persons whose functional currency for U.S. federal income tax purposes is not the U.S. dollar;
- entities classified as partnerships for U.S. federal income tax purposes;
- tax-exempt entities, "individual retirement accounts" or "Roth IRAs";
- persons that own or are deemed to own ten percent or more of TIM stock by vote or value;

[11] If sent from abroad, the return must be placed in a fitting envelope of a size suitable to contain it without folding it. The envelope must be addressed to the Revenue Agency, Venice Operations Center, via Giorgio De Marchi n. 16, 30175 Marghera (VE)—Italy. The declarant's Italian tax identification number must be indicated on the envelope along with the following words "Contiene dichiarazione Modello FTT" ("It contains FTT Form declaration").

- persons who acquired TIM Shares or ADSs pursuant to the exercise of an employee stock option or otherwise as compensation; or
- persons holding TIM Shares in connection with a trade or business conducted outside of the United States.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds TIM Shares or ADSs, the U.S. federal income tax treatment of a partner in the partnership will generally depend on the status of the partner and the activities of the partnership. Partnerships holding TIM Shares or ADSs and partners in such partnerships should consult their tax advisers as to the particular U.S. federal income tax consequences of holding and disposing of the TIM Shares or ADSs.

This discussion is based on the Code, administrative pronouncements, judicial decisions, final, temporary and proposed Treasury regulations, and the Treaty, all as of the date hereof, any of which is subject to change, possibly with retroactive effect. It is also based in part on representations by the Depositary and assumes that each obligation under the Deposit Agreement and any related agreement will be performed in accordance with its terms.

A "U.S. Holder" is a person who, for U.S. federal income tax purposes, is a beneficial owner of TIM Shares or ADSs who is eligible for the benefits of the Treaty and is:

- a citizen or individual resident of the United States;
- a corporation, or other entity taxable as a corporation, created or organized in or under the laws of the United States, any state therein or the District of Columbia; or
- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

In general, a U.S. Holder who owns ADSs will be treated as the owner of the underlying Ordinary Shares or Saving Shares, as the case may be, represented by those ADSs for U.S. federal income tax purposes. Accordingly, no gain or loss will be recognized if a U.S. Holder exchanges ADSs for the underlying Ordinary Shares or Saving Shares, as the case may be, represented by those ADSs.

The U.S. Treasury has expressed concern that parties to whom American depositary shares are released before shares are delivered to the depositary ("pre-release"), or intermediaries in the chain of ownership between holders and the issuer of the security underlying the American depositary shares, may be taking actions that are inconsistent with the claiming of foreign tax credits by holders of American depositary shares. These actions would also be inconsistent with the claiming of the reduced rate of tax, described below, applicable to dividends received by certain non-corporate holders. Accordingly, the creditability of Italian taxes, and the availability of the reduced tax rate for dividends received by certain non-corporate U.S. Holders, each described below, could be affected by actions taken by such parties or intermediaries.

U.S. Holders should consult their tax advisers concerning the U.S. federal, state, local and foreign tax consequences of owning and disposing of TIM Shares or ADSs in their particular circumstances.

This discussion assumes that TIM has not been, and will not become, a passive foreign investment company, as described below.

Taxation of distributions

Distributions made with respect to the TIM Shares or ADSs (other than certain pro rata distributions of TIM Shares or ADSs), including any Italian tax withheld, will generally constitute foreign-source dividend income for U.S. federal income tax purposes to the extent such distributions are made from TIM's current or accumulated earnings and profits, as determined in accordance with U.S. federal income tax principles. Because TIM does not maintain calculations of earnings and profits under U.S. federal income tax principles, it is expected that distributions will generally be reported to U.S. Holders as dividends. If you are a non-corporate U.S. Holder, subject to applicable limitations that vary depending on your particular circumstances and the discussion above regarding concerns expressed by the U.S. Treasury, dividends paid to you may be taxable at the favorable rates applicable to long-term capital gains. Non-corporate U.S. Holders should consult their own tax advisers regarding the availability of the reduced tax rate on dividends. If you are a corporate U.S. Holder you will not be entitled to

claim a dividends-received deduction for dividends paid on the TIM Shares or ADSs. The amount of any cash distribution paid in euros, including the amount of any Italian tax withheld, will be included in your income in an amount equal to the U.S. dollar value of such euros on the date of receipt by the Depositary, in the case of U.S. Holders of ADSs, or by the U.S. Holder, in the case of U.S. Holders of TIM Shares, regardless of whether the payment is in fact converted into U.S. dollars. If the dividend is converted into U.S. dollars on the date of receipt, you generally should not be required to recognize foreign currency gain or loss in respect of the dividend income. You may have foreign currency gain or loss if the amount of such dividend is converted into U.S. dollars after the date of its receipt. Gain or loss, if any, recognized on the sale or other disposition of such euros will be U.S.-source ordinary income or loss. The amount of any distribution of property other than cash will be the fair market value of such property on the date of distribution.

Subject to certain limitations and restrictions and the discussion above regarding concerns expressed by the U.S. Treasury, Italian taxes withheld from distributions on TIM Shares or ADSs at a rate not in excess of that applicable under the Treaty will be eligible for credit against a U.S. Holder's U.S. federal income tax liability. Italian taxes to the extent such taxes are in excess of the applicable Treaty rate or are refundable under domestic Italian law will generally not be eligible for credit against a U.S. Holder's U.S. federal income tax liability (See "Section 10.6.1—Italian Taxation—Dividends taxation" for a discussion of how to obtain the Treaty withholding rate or refunds). Instead of claiming a credit, you may, at your election, deduct such Italian taxes in computing your taxable income, subject to generally applicable limitations under U.S. law. An election to deduct foreign taxes instead of claiming foreign tax credits applies to all taxes paid or accrued in the taxable year to foreign countries and possessions of the United States. You should consult your tax adviser concerning the foreign tax credit implications of the payment of any Italian withholding taxes.

Taxation of capital gains

A U.S. Holder will generally recognize U.S.-source capital gain or loss on the sale or other disposition of TIM Shares or ADSs, which will be long-term capital gain or loss if the U.S. Holder held the TIM Shares or ADSs for more than one year. The amount of gain or loss will be equal to the difference between the gross amount realized and the U.S. Holder's adjusted tax basis in the TIM Shares or ADSs, in each case as determined in U.S. dollars. Any Italian capital gains tax imposed on dispositions of TIM Shares or ADSs generally will not be creditable against a U.S. Holder's federal income tax liability. U.S. Holders should consult their own tax advisers about the treatment of capital gains, which may be taxed at lower rates than ordinary income for non-corporate taxpayers, and capital losses, the deductibility of which may be limited.

Passive Foreign Investment Company Rules

TIM believes that it was not a "passive foreign investment company" ("**PFIC**") for U.S. federal income tax purposes for 2018. However, since PFIC status depends upon the composition of TIM's income and assets and the market value of TIM's assets (including, among others, less than 25 percent owned equity investments) from time to time, there can be no assurance that TIM will not be a PFIC for any taxable year. If TIM were a PFIC for any taxable year during which a U.S. Holder held TIM Shares or ADSs, certain adverse tax consequences could apply to the U.S. Holder.

Information Reporting and Backup Withholding

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries generally are subject to information reporting, and may be subject to backup withholding, unless (i) the U.S. Holder is an exempt recipient or (ii) in the case of backup withholding, the U.S. Holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding.

The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder's U.S. federal income tax liability and may entitle it to a refund, provided that the required information is timely furnished to the Internal Revenue Service.

Subject to certain exceptions, U.S. Holders who are individuals or certain specified entities may be required to report information relating to securities of non-U.S. companies, or non-U.S. accounts through which they are held. U.S. Holders should consult their tax advisers regarding the effect, if any, of these rules on their ownership or disposition of TIM Shares or ADSs.

10.7 DOCUMENTS ON DISPLAY

We file Annual Reports on Form 20-F and furnish periodic reports on Form 6-K to the SEC. Our SEC filings are available at the website maintained by the SEC at www.sec.gov.

Our ADSs are listed on the New York Stock Exchange under the symbol "TI". You may inspect any periodic reports and other information filed with or furnished to the SEC by us at the offices of the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

As a foreign private issuer, we are exempt from the rules under the Exchange Act which prescribe the furnishing and content of proxy statements, and our officers, directors and principal shareholders are exempt from the reporting and "short-swing" profit recovery provisions contained in Section 16 of the Exchange Act.

We are subject to the informational requirements of the Italian securities commission and the Italian stock exchange, and we file reports and other information relating to our business, financial condition and other matters with the Italian securities commission, the Italian stock exchange and with the regulated storage system 1Info. You may read such reports, statements and other information, including the annual, semi-annual and quarterly financial statements, at the website www.1Info.it. Some of our Italian securities commission filings are also available at the website maintained by the Italian securities commission at www.consob.it.

As described elsewhere in this Annual Report, certain reports, statements and presentations related to TIM can be found on our website at www.telecomitalia.com.

We have appointed JPMorgan Chase Bank, N.A. to act as depositary for our ADSs. JPMorgan Chase Bank will, as provided in the deposit agreement, arrange for the mailing of summaries in English of such reports and communications to all record holders of our ADSs. Any record holder of our ADSs may read such reports and communications or summaries thereof at JPMorgan Chase Bank's office located at 4 New York Plaza, New York, New York 10004.

Item 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISKS

With regard to the quantitative and qualitative disclosures about market risks, please see the "Note—Financial Risk Management" of the Notes to the Consolidated Financial Statements included elsewhere herein, which provides:

- the objectives and the policies for the management of the financial risks of TIM Group, and
- the sensitivity analyses of the market risks we are exposed to.

The above mentioned Note should be read in conjunction with the "Note—Accounting Policies", "Note—Derivatives" and "Note—Supplementary Disclosures on Financial Instruments" of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report, which provide other information relating to financial instruments.

Item 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Item 12A. DEBT SECURITIES

Not applicable.

Item 12B. WARRANTS AND RIGHTS

Not applicable.

Item 12C. OTHER SECURITIES

Not applicable.

Item 12D. AMERICAN DEPOSITARY SHARES

Description of fees and charges paid by ADR Holders

As provided for in the American Depositary Receipt included as Exhibit A to the Deposit Agreement between JP Morgan Chase Bank, as depositary (the "**Depositary**"), TIM S.p.A. and Holders of American Depositary Receipts dated as of November 16, 2017, holders of American Depositary Shares may be charged, directly or indirectly, the following amounts in relation to the ownership of depositary receipts held in the Company's ADR Program, which amounts are payable to the Depositary.

	Category of Service	Depositary Actions	Associated Fee
a)	Deposit of underlying shares or surrender of ADRs	Each person to whom ADSs are issued, including without limitation, issuances against deposits of Shares, issuances in respect of Share Distributions, Rights and Other Distributions (1) or issuances pursuant to a stock dividend or stock split declared by the Company, or issuances pursuant to a merger, exchange of securities or any other transaction or event affecting the ADSs or the Deposited Securities. Each person surrendering ADSs for withdrawal of Deposited Securities or whose ADSs are cancelled or reduced for any other reason.	U.S.$5.00 for each 100 ADSs (or portion thereof) issued, delivered, reduced, cancelled or surrendered (as the case may be).
b)	Deposit, withdrawal or surrender of ADSs by any Party or issue of ADSs to such Party	The following additional charges shall be incurred by the Holders by any party depositing or withdrawing Shares or by any party surrendering ADSs and/or to whom ADSs are issued (including, without limitation, issuances pursuant to a stock dividend or stock split declared by the Company or an exchange of stock regarding the ADSs or the Deposited Securities or a distribution of ADSs pursuant to paragraph (10) of the Deposit Agreement), whichever is applicable.	(i) a fee of U.S.$0.05 or less per ADS for any Cash distribution made pursuant to the Deposit Agreement. (ii) a fee of U.S.$1.50 per ADR or ADRs for transfers made pursuant to paragraph (3) of the Deposit Agreement. (iii) a fee for the distribution or sale of securities pursuant to paragraph (10) of the Deposit Agreement, such fee being in an amount equal to the fee for the execution and delivery of ADSs referred to above which would have been charged as a result of the deposit of such securities (for purposes of this paragraph treating all such securities as if they were Shares) but which securities or the net cash proceeds from the sale thereof are instead distributed by the Depositary to Holders entitled thereto.
c)	Services performed by the Depositary in administering the ADRs	Services performed by the Depositary in administering the ADRs (which fee may be charged on a periodic basis during each calendar year and shall be assessed against Holders as of the record date or record dates set by the Depositary during each calendar year and shall be payable at the sole discretion of the Depositary by billing such Holders or by deducting such charge from one or more cash dividends or other cash distributions).	An aggregate fee of U.S.$0.05 per ADS per calendar year (or portion thereof).
d)	Fees incurred by the Depositary	A fee for the reimbursement of such fees, charges and expenses as are incurred by the Depositary and/or any of its agents (including, without limitation, the	Reimbursement of fees charges and expenses as incurred by the Depositary and/or any of its agents.

Category of Service	Depositary Actions	Associated Fee
	Custodian and expenses incurred on behalf of Holders in connection with compliance with foreign exchange control regulations or any law or regulation relating to foreign investment) in connection with the servicing of the Shares or other Deposited Securities, the sale of securities (including, without limitation, Deposited Securities), the delivery of Deposited Securities or otherwise in connection with the Depositary's or its Custodian's compliance with applicable law, rule or regulation (which fees and charges shall be assessed on a proportionate basis against Holders as of the record date or dates set by the Depositary and shall be payable at the sole discretion of the Depositary by billing such Holders or by deducting such charge from one or more cash dividends or other cash distributions).	
e) Expenses by the Depositary	Expenses incurred on behalf of Holders in connection with:	
	(i) stock transfer or other taxes and other governmental charges	As necessary
	(ii) SWIFT, cable, telex and facsimile transmission and delivery charges incurred at the request of persons depositing, or Holders delivering Shares, ADRs or Deposited Securities	US $20.00 per transaction
	(iii) in connection with the conversion of foreign currency into U.S. dollars, the Depositary shall deduct out of such foreign currency the fees, expenses and other charges charged by it and/or its agent (which may be a division, branch or affiliate) so appointed in connection with such conversion. The Depositary and/or its agent may act as principal for such conversion of foreign currency. Such charges may at any time and from time to time be changed by agreement between the Company and the Depositary.	As necessary

(1) The Depositary may sell (by public or private sale) sufficient securities and property received in respect of such share distributions, rights and other distributions prior to such deposit to pay such charge.

Item 12. Description Of Securities Other Than Equity Securities	

Direct and indirect payments made by JP Morgan Chase Bank to TIM in relation to the Company's ADR program

Pursuant to the Letter Agreement signed on November 20, 2017 (effective January 1, 2017) between TIM S.p.A. and J.P. Morgan Chase Bank N.A., as Depositary, J.P. Morgan has agreed to pay TIM an annual Contribution which will be calculated according to the mechanism set out in paragraph 1 of the Letter Agreement ("Obligations of the Depositary and the Company").

For the contract year 2018, the Contribution paid by J.P. Morgan to TIM was equal to US$ 837,500.

PART II

Item 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

Not applicable.

Item 14. Material Modification to the Rights Of Security Holders And Use Of Proceeds	

Item 14. MATERIAL MODIFICATION TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

Not applicable.

Item 15. CONTROLS AND PROCEDURES

15.1. DISCLOSURE CONTROLS AND PROCEDURES

The Company, under the supervision of the Chief Executive Officer and of the Head of Administration, Finance and Control, according to the Company's 404 Process guidelines (revised also to meet the reporting requirements set forth by article 154-bis of the Italian Legislative Decree 58/1998; the aforementioned Italian rule provides for a special report broadly corresponding in scope to the certifications and the management's report on internal control over financial reporting required by the Sarbanes Oxley Act) performed an evaluation of the effectiveness of the Company's disclosure controls and procedures as of December 31, 2018. The Company's management necessarily applied its judgment in assessing the costs and benefits of such controls and procedures, which by their nature can provide only reasonable assurance regarding management's control objectives. Based on this evaluation, the Company's Chief Executive Officer and the Company's Head of Administration, Finance and Control concluded that the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) are effective at the reasonable assurance level.

15.2. MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the Company's Chief Executive Officer and the Company's Head of Administration, Finance and Control and effected by the Company's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures for the company are being made only in accordance with authorizations of management and directors of the company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use of disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Company's management assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2018. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("**COSO**") in *Internal Control-Integrated Framework-2013.*

Based on management's assessment, management has concluded that, as of December 31, 2018, the Company's internal control over financial reporting is effective based on those criteria.

PricewaterhouseCoopers S.p.A., the independent registered public accounting firm that audited the consolidated financial statements included in this annual report, has audited the effectiveness of internal control over financial reporting as of December 31, 2018. Their attestation report on internal control over financial reporting is included herein.

15.3. CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There has been no change in the Company's internal control over financial reporting that occurred during the period covered by this annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 16. [RESERVED]

Item 16A. AUDIT COMMITTEE FINANCIAL EXPERT

The Board of Auditors in office as of April 8, 2019 determined that each of its members is an "audit committee financial expert" as defined in Item 16A of Form 20-F. For the names of the members of the Board of Auditors, see "Item 6. Directors, Senior Management and Employees—6.3 Board of Auditors".

Item 16B. CODE OF ETHICS AND CONDUCT

On March 23, 2004, TIM adopted its Code of Ethics and Conduct which applies - among the others - to the Company's members of the corporate bodies, (included the Executive Chairman and the Chief Executive Officer), to the management (included the Chief Financial Officer), as well as to all the Group's employees in and outside Italy; the suppliers of the Company are required to accept and apply it, too. The Code of Ethics and Conduct has subsequently been amended from time to time by the Board of Directors, which acted on the basis of opinions by the Control and Risk Committee and the Board of Statutory Auditors, in order to conform it to the developments in the applicable law and market regulations, taking into account national and international best practices. The Code of Ethics and Conduct in force is available on TIM's website at www.telecomitalia.com. See also under "Item 16G. Corporate Governance—16G.1 Differences in TIM's Corporate Governance and New York Stock Exchange Corporate Governance Practices" and "Item 10. Additional Information—10.1 Corporate Governance".

Item 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

For the year ended December 31, 2018, PricewaterhouseCoopers S.p.A. served as TIM's independent auditor.

"PricewaterhouseCoopers" means PricewaterhouseCoopers S.p.A., the auditor of the Company, as well as all the Italian and foreign entities belonging to the PricewaterhouseCoopers network.

The following table sets forth the aggregate fees for professional services and other services rendered by PricewaterhouseCoopers in 2018 and in 2017.

Type of Fees(*)	Fiscal year ended December 31, 2018	2017
	(thousands of euros)	
Audit Fees(1)	6,748	6,936
Audit-related Fees(2)	412	373
Total	**7,160**	**7,309**

(*) In 2018 and in 2017, no further services, other than audit fees and audit-related fees, where provided by PricewaterhouseCoopers.

(1) Audit fees consist of fees billed for professional services in connection with audits of TIM's annual financial statements, reviews of interim financial statements as well as comfort letters issued in relation to capital market transactions, agreed upon procedures for certain financial statement areas, included those required for some transactions by regulations in Italy and abroad.

(2) Audit-related fees consist of fees billed for professional services rendered in connection with assurance and related services not included under "Audit Fees".

The Board of Auditors (also in its role as TIM's Audit Committee), in accordance with and to the extent permitted by applicable Italian law, is responsible for the appointment, retention and oversight of the work of the Company's external auditors engaged for the purpose of issuing the audit report on the annual financial statements. In accordance with Italian law and, since January 1, 2017, with European regulation, the Board of Auditors makes a reasoned proposal to the Shareholders' Meeting which appoints the external auditors and determines their compensation.

During 2017 and as a result of the above mentioned new legislation, TIM, together with its Board of Auditors, adopted the "Guidelines for the Assignments to the Independent Auditor" (the "**Group Procedure**") which are currently in force.

The above mentioned Group Procedure provides instructions, among other things, for the following:

- assignment to audit the Company's financial statements: the assignment is authorized by TIM's shareholders' meeting, acting on a reasoned proposal from the Board of Auditors;
- additional assignments: the commissioning of non-prohibited additional assignments by TIM and its subsidiaries is subject to the authorization by the TIM's Board of Statutory Auditors.

An authorization is not granted if the service falls within a category of services not permitted by current law and regulation or if it is inconsistent with maintaining auditor independence.

The Group Procedure provides the following list (not exhaustive) of audit and permitted non-audit services which are subject to the authorization by the TIM Board of Auditors or, where applicable, by the relevant Audit Committees of the subsidiaries that are classified as SEC-registered, or PIEs. The latter determinations are endorsed by the TIM Board of Auditors, provided that they are made on the basis of rules compliant with the applicable regulations—including United States regulations—and in conformity with the Group Procedure in the matter:

Audit Services:

- audit of the financial statements and reporting packages for consolidation of TIM's subsidiaries;
- review of the working papers of another auditor when necessary for the audit of the financial reports of TIM or companies it controls;

- verification services for the issue of consent letters;
- auditing of financial statements and/or balance sheets to be published in prospectuses and disclosure documents, offering memoranda and the like;
- assistance with requests from the *Commissione Nazionale per le Società e la Borsa* (The Italian Companies and Stock Exchange Commission—CONSOB) and the US Securities and Exchange Commission (SEC) or any similar authorities;
- auditing/control services in connection with the awarding of grants/loans or obtaining specific tax or social security contribution treatment;
- verification of the conformity of so-called sustainability and social reports (similarly, this includes—if applicable—the Attestation Service on non-financial information in accordance with Italian Legislative Decree No. 254/2016);
- issuance of comfort letters in relation to the implementation of extraordinary financial transactions;
- reports and opinions requested by law to the Appointed Auditor;
- various attestation services (including those for participating in tenders called by national and/or multi-national government entities).

Permitted Non-audit Services:

- agreed procedures on regulatory accounting areas;
- financial due diligence procedures on companies subject to sale and acquisition.

Furthermore, in accordance with the Group Procedure above, the Manager responsible for preparing the Company's financial reports (who acts under the supervision of the TIM Board of Auditors) sends, on a quarterly basis, to the Board of Auditors and to the Control and Risk Committee, the information gathered on any Additional Assignments awarded.

Item 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Please see "Item 10. Additional Information—10.1. Corporate Governance".

Item 16E. REPURCHASES OF EQUITY SECURITIES

From January 1, 2018, to December 31, 2018, no purchases of Ordinary Shares or Savings Shares were made by or on behalf of TIM or any affiliated company.

Item 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

PricewaterhouseCoopers S.p.A. ("**PwC**") has been the independent registered public accounting firm for TIM Sp.A and its subisidiaries ("**TIM**") and was appointed by TIM's shareholders meeting on April 29, 2010 for the 2010-2018 fiscal years.

In accordance with European and Italian legal regulations relating to the mandatory rotation of independent audit firms for public companies, no renewal or extension of the accounting firm is permitted. As a result of such regulations the Company did not seek to renew PwC's contract beyond nine years when it expired and PwC did not attempt to stand for re-election.

On March 29, 2019, TIM's shareholders meeting approved the appointment of Ernst & Young S.p.A. as the Company's new independent registered public accounting firm for a nine-year term beginning with the fiscal year commencing on January 1, 2019.

The audit reports of PwC on the Consolidated Financial Statements of TIM as of and for the years ended December 31, 2018 and 2017, did not contain any adverse opinion or disclaimer of opinion, nor were they qualified or modified as to uncertainty, audit scope or accounting principles.

During the fiscal years ended December 31, 2018 and 2017 and the subsequent interim period through April 16, 2019, there were no (1) disagreements (as defined in the instructions to Item 16F of Form 20-F) with PwC on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedures, which disagreements, if not resolved to their satisfaction, would have caused them to make reference thereto in connection with their opinion, or (2) reportable events (as defined in Item 16F of Form 20-F).

The Company has provided PwC with a copy of the foregoing disclosure and has requested that they furnish the Company with a letter addressed to the SEC stating whether they agree with such disclosure and, if not, stating the respects in which they do not agree. A copy of PwC's letter, dated April 16, 2019, in which PwC states that they agree with such disclosure, is filed herewith as Exhibit 15.1.

During the two most recent fiscal years prior to the appointment of Ernst & Young S.p.A. as our independent registered accounting firm and the subsequent interim period through April 16, 2019, neither we nor anyone on our behalf consulted Ernst & Young S.p.A. regarding either (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on our consolidated financial statements, nor has Ernst & Young S.p.A. provided to us any written report or oral advice on any accounting, auditing or financial reporting issue, or (ii) any matter that was either the subject of a "disagreement", as that term is defined in Item 16F(a)(1)(iv) of Form 20-F and the related instructions to Item 16F of Form 20-F, or a "reportable event," as that term is described in Item 16F(a)(1)(v) of Form 20-F.

Item 16G. CORPORATE GOVERNANCE

16G.1 DIFFERENCES IN TIM'S CORPORATE GOVERNANCE AND NEW YORK STOCK EXCHANGE CORPORATE GOVERNANCE PRACTICES

We believe the following to be the significant differences between our corporate governance practices and NYSE corporate governance rules applicable to US companies.

Independent Directors. Under NYSE listing rules applicable to US companies, independent directors must comprise a majority of the board of directors.

Article 147-ter of the Italian Consolidated Law on Finance requires boards, with more than seven members, to have at least two directors who meet the criteria set forth by Article 148 for the independence of the members of the Board of Statutory Auditors; in addition the Borsa Italiana Corporate Governance Code requires Boards of Directors to have an adequate number of independent members, and defines the criteria to be applied in determining independence. TIM's Corporate Governance Principles incorporate by reference the same independence criteria set forth by the Borsa Italiana Code. Presently 12 out 15 members of the TIM Board qualify as independent, as they meet both the requirements set forth by Article 148, and the criteria set forth by the Borsa Italiana Corporate Governance Code. For a description of how the Company's bylaws (through the specific rules governing the appointment of the Board) provide for an adequate number of appointees being independent, see "Item 10. Additional information-10.1 Corporate Governance".

Non-management Directors Meeting. Pursuant to NYSE listing standards, non-management directors must meet on a regular basis without management present and independent directors must meet separately at least once per year. Borsa Italiana's Corporate Governance Code requires independent directors to meet at least once a year without management present.

TIM's Corporate Governance Principles establish the position of Lead Independent Director. The position is intended to provide a point of reference and coordination for the needs and inputs of the independent directors and is entrusted with the power to call special meetings of independent members (Independent Directors' Executive Sessions) to discuss, separately from the management, issues related to the working of the Board and the management of the business. In 2018 a total of 2 such sessions were held, in addition to 3 other meetings of independent directors, which were held for other purposes. The Lead Independent Director may use the Company's support functions in performing his tasks. As of April 8, 2019 the position is held by Dante Roscini. For further details, see also "Item 10. Additional information—10.1 Corporate Governance— Board of Directors— Executive Directors and Activities of the Board".

Board of Directors' Internal Committees. According to NYSE listing standards, US companies listed on the NYSE are required to have a Nominating/Corporate Governance Committee, a Compensation Committee and an Audit Committee. Also according to Borsa Italiana's Corporate Governance Code, the Board of Directors shall establish among its members a Nominating Committee (made up, for the majority, of independent directors) a Remuneration Committee (made up of independent directors or of non-executive directors, the majority of which are to be independent) and a Control and Risk Committee (made up of independent directors or non-executive directors, the majority of which are to be independent).

TIM Board specifically established a Nomination and Remuneration Committee (thus combining responsibilities and roles of the Nominating Committee and the Remuneration Committee), a Control and Risk Committeeand an ad-hoc Board committee (so-called Related Parties Committee) to examine and opine upon transactions with related parties, according to Consob specific rules (see "Item 10. Additional information-10.1 Corporate Governance" for further details).

Nominating/Corporate Governance Committee. Under NYSE standards, the nominating/corporate governance committee is composed entirely of independent directors. In addition to identifying individuals qualified to become board members, this committee must develop and recommend to the board a set of corporate governance principles. Pursuant to NYSE standards, this committee should also adopt a written charter.

Article 9 of TIM's bylaws provides for the members of the Board of Directors to be elected using the slate system, which permits shareholders, who, alone or together, hold shares representing at least 0.5% of the share capital, to

put forward slates of nominees for the appointment as directors: the system is intended to ensure the presence on the Board of persons designated by minority shareholders. Thus, the Company's view is that using the slate system meets the needs otherwise served by the creation of a Nominating Committee.

On the other hand, the Nomination and Remuneration Committee (made up of non-executive directors only, a majority of whom must be independent, one of them chosen from a minority slate), among other activities, is in charge of submitting to the Board of Directors candidates for appointment as director in case of co-optation, should the replacement of independent directors be necessary. In addition TIM has a Control and Risk Committee (made up of non-executive directors only, a majority of whom must be independent, one of them chosen from a minority slate) which, among other activities, actively participates and assists in developing and implementing the corporate governance procedures adopted by TIM.

For further details, see also "Item 10. Additional information—10.1 Corporate Governance—Board of Directors—Internal Committees".

Remuneration Committee. Under NYSE standards, the Remuneration Committee is composed entirely of independent directors. In addition to the review and approval of corporate goals relevant to CEO compensation and evaluation of the CEO performance in light of those given, this committee must determine and approve the CEO's compensation and make recommendations to the Board of Directors with respect to non-CEO compensation, incentive-compensation plans and equity-based plans.

TIM has a Nomination and Remuneration Committee, made up of non-executive directors only, a majority of whom are independent (one of them chosen from a minority slate). Pursuant to the Company's Corporate Governance Principles, the Remuneration Committee shall, among other things:

- oversee the succession plan for Executive Directors, and monitor the updating of the company management replacement lists, prepared by the Executive directors;
- establish the procedure for the annual evaluation of the Board of Directors;
- propose the criteria for allocating the total annual compensation established by the Shareholders' Meeting for the whole Board of Directors;
- perform other duties assigned to it by the Board of Directors;
- express opinions to the Board of Directors regarding its size and composition and express recommendations with regard to the professional skills necessary within the Board;
- submit the Board of Directors candidates for directors offices in case of cooptation, should the replacement of independent directors be necessary;
- periodically evaluate the adequacy, overall consistency and actual application of the policy for the remuneration of directors and key management personnel, on the basis of the information provided by the managing directors; it shall formulate proposals to the Board of Directors in that regard;
- submit proposals or issue opinions to the Board of Directors for the remuneration of executive directors and other directors who cover particular offices as well as for the identification of performance objectives related to the variable component of that remuneration; it shall monitor the implementation of decisions adopted by the Board of Directors and verify, in particular, the actual achievement of performance objectives.

According to the procedure for transactions with the Company's related parties, adopted by board resolution of June 25, 2018 and subsequently amended (available on the www.telecomitalia.com website, Governance section—Governance System channel), in case of resolutions regarding the remuneration of directors and executive officers with strategic responsibilities the tasks assigned to the board committee by the TIM procedure are in this case performed by the Nomination and Remuneration Committee.

For further details, see also "Item 10. Additional information —10.1 Corporate Governance—Board of Directors—Internal Committees".

Audit Committee. US companies listed on the NYSE are required to establish an Audit Committee that satisfies the requirements of Rule 10A-3 under the 1934 Act.

The Board of Auditors, as permitted by Rule 10A-3, is performing the corresponding functions for TIM, which therefore is exempted from the requirement to have a separate audit committee.

A Rule 303A written affirmation to this end was submitted to the NYSE on April 30, 2018. For further details, see also "10.1 Corporate Governance—General—Board of Directors" and "Item 10. Additional information—10.1 Corporate Governance—Board of Auditors".

Adoption and Disclosure of Corporate Governance Guidelines. US companies listed on the NYSE are required to adopt and disclose corporate governance guidelines.

Such disclosures are included in this Form 20-F and English translations of the TIM Group's corporate governance policies can be found on TIM's website: www.telecomitalia.com under "Governance".

Code of business conduct and ethics. NYSE listing standards require US companies to adopt a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers. The code should provide for the reporting of violations of its provisions or of laws and regulations.

TIM has adopted such a Code. See also under "Item 16B.—Code of Ethics and Conduct".

Annual Certification by the Chief Executive Officer. A chief executive officer of a US company listed on the NYSE must annually certify that he or she is not aware of any violation by the company of NYSE corporate governance standards.

In accordance with NYSE listing rules applicable to foreign private issuers, TIM submitted its foreign private issuer annual written affirmation on April 30, 2018.

Item 16H. MINE SAFETY DISCLOSURE

Not applicable.

Item 17. Financial Statements	

PART III

Item 17. FINANCIAL STATEMENTS

Not applicable.

Item 18. FINANCIAL STATEMENTS

Reference is made to Item 19 for a list of all financial statements filed as part of this Annual Report.

Item 19. FINANCIAL STATEMENTS AND EXHIBITS

(a) Financial Statements

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(b) Exhibits

1.1 Bylaws of the Company.(1)

2.1 Deposit Agreements.(2)

(a) Deposit Agreement dated as of November 16, 2017, among the Company, JPMorgan Chase Bank, as Depositary and the holders from time to time of American Depositary Receipts representing Ordinary Shares of the Company.

(b) Deposit Agreement dated as of November 16, 2017, among the Company, JPMorgan Chase Bank, as Depositary and the holders from time to time of American depositary Receipts representing Savings shares of the Company.

2.2 Trust deed dated January 23, 2004, between TIM (as Issuer and Guarantor), Telecom Italia Finance (as Issuer) and J.P. Morgan Corporate Trustee Services Limited relating to a 10 billion euros Medium Term Note Program. We hereby agree to furnish to the Commission, upon its request, a copy of any instrument defining the rights of holders of our long-term debt or that of our subsidiaries for which consolidated or unconsolidated financial statements are required to be filed.(3)

4.1 Public Telecommunications Authorization.(4)

Decision No. 820/00/CONS of 11.22.2000. General Authorization, former individual license for installation and supply of public telecommunications network and for the provision to the public of a voice telephony service (*modifications to the concessions and annexed conventions, ex SIP, Iritel and Italcable*).

4.2 Long Term Incentive Plan 2018

8.1 List of Subsidiaries.(5)

12(a) Certification by the Chief Executive Officer of TIM S.p.A.

12(b) Certification by the Head of Administration, Finance and Control of TIM S.p.A.

13.1 Section 906 Certification submitted for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Item 19. Financial Statements and Exhibits	

15.1 Letter from PricewaterhouseCoopers S.p.A. dated April 16, 2019, regarding change in independent registered public accounting firm.

101.INS XBRL Instance Document
101.SCH XBRL Taxonomy Extension Schema Document
101.CAL XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF XBRL Taxonomy Extension Definition Linkbase Document
101.LAB XBRL Taxonomy Extension Label Linkbase Document
101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

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(1) Incorporated by reference to the Exhibits filed with the Company's Annual Report on Form 20-F on April 12, 2017 (File No. 001-13882).

(2) Incorporated by reference to the Exhibits filed with the Company's Annual Report on Form 20-F on April 16, 2018 (File No. 001-13882).

(3) Incorporated by reference to the Exhibits filed with the Company's Annual Report on Form 20-F on June 10, 2004 (File No. 001-13882).

(4) Incorporated by reference to the Exhibits filed with the Company's Annual Report on Form 20-F on June 29, 2001 (File No. 001-13882). (P)

(5) Please see "Note 43—List of Companies of the TIM Group" of the Notes to the Consolidated Financial Statements included elsewhere herein.

Item 19. Financial Statements and Exhibits	

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant certifies that it meets all the requirements for filing on Form 20-F and has duly caused this Annual Report to be signed on its behalf by the undersigned, thereunto duly authorized.

TIM S.p.A

By: /S/ Luigi Gubitosi
Name: **Luigi Gubitosi**
Title: **Chief Executive Officer**

Dated April 16, 2019

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of TIM S.p.A.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated statements of financial position of TIM SpA and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated income statements, statements of comprehensive income, statements of changes in equity and statements of cash flow for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and December 31, 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing in item 15.2. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance

with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers S.p.A.
Milan, Italy
April 16, 2019

We have served as the Company's auditor since 2010.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION AS OF DECEMBER 31, 2018 AND DECEMBER 31, 2017—ASSETS

	Note	As of December 31, 2018	As of December 31, 2017
		(millions of euros)	
NON-CURRENT ASSETS			
Intangible assets			
Goodwill	5	26,769	29,462
Intangible assets with a finite useful life	6	8,889	7,192
		35,658	**36,654**
Tangible assets	7		
Property, plant and equipment owned		14,251	14,216
Assets held under finance leases		1,895	2,331
		16,146	**16,547**
Other non-current assets			
Investments in associates and joint ventures accounted for using the equity method	8	16	17
Other investments	8	49	51
Non-current financial assets	9	1,594	1,768
Miscellaneous receivables and other non-current assets	10	2,291	2,422
Deferred tax assets	11	1,136	993
		5,086	**5,251**
TOTAL NON-CURRENT ASSETS (A)		**56,890**	**58,452**
CURRENT ASSETS			
Inventories	12	389	290
Trade and miscellaneous receivables and other current assets	13	4,706	4,959
Current income tax receivables	11	251	77
Current financial assets	9		
Securities other than investments, financial receivables and other current financial assets		1,466	1,430
Cash and cash equivalents		1,917	3,575
		3,383	**5,005**
Current assets sub-total		**8,729**	**10,331**
Discontinued operations /Non-current assets held for sale	14		
of a financial nature		—	—
of a non-financial nature		—	—
TOTAL CURRENT ASSETS (B)		**8,729**	**10,331**
TOTAL ASSETS (A+B)		**65,619**	**68,783**

The accompanying notes are an integral part of these consolidated financial statements

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION AS OF DECEMBER 31, 2018 AND DECEMBER 31, 2017—EQUITY AND LIABILITIES

	Note	As of December 31, 2018	As of December 31, 2017
		(millions of euros)	
EQUITY	15		
Share capital issued		11,677	11,677
Less: treasury shares		(90)	(90)
Share capital		11,587	11,587
Additional paid-in capital		2,094	2,094
Other reserves and retained earnings (accumulated losses), including profit (loss) for the year		5,847	7,876
Equity attributable to owners of the Parent		**19,528**	**21,557**
Non-controlling interests		**2,219**	**2,226**
TOTAL EQUITY (A)		**21,747**	**23,783**
NON-CURRENT LIABILITIES			
Non-current financial liabilities	16	25,059	28,108
Employee benefits	20	1,567	1,736
Deferred tax liabilities	11	192	265
Provisions	21	876	825
Miscellaneous payables and other non-current liabilities	22	3,297	1,678
TOTAL NON-CURRENT LIABILITIES (B)		**30,991**	**32,612**
CURRENT LIABILITIES			
Current financial liabilities	16	5,913	4,756
Trade and miscellaneous payables and other current liabilities	23	6,901	7,520
Current income tax payables	11	67	112
Current liabilities sub-total		**12,881**	**12,388**
Liabilities directly associated with Discontinued operations/ Non-current assets held for sale	14		
of a financial nature		—	—
of a non-financial nature		—	—
TOTAL CURRENT LIABILITIES (C)		**12,881**	**12,388**
TOTAL LIABILITIES (D=B+C)		**43,872**	**45,000**
TOTAL EQUITY AND LIABILITIES (A+D)		**65,619**	**68,783**

The accompanying notes are an integral part of these consolidated financial statements

SEPARATE CONSOLIDATED INCOME STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2018, 2017 AND 2016

	Note	Year ended December 31, 2018	2017	2016
		(millions of euros)		
Revenues	25	18,940	19,828	19,025
Other income	26	341	523	311
Total operating revenues and other income		**19,281**	**20,351**	**19,336**
Acquisition of goods and services	27	(8,186)	(8,388)	(7,793)
Employee benefits expenses	28	(3,105)	(3,626)	(3,106)
Other operating expenses	29	(1,259)	(1,208)	(1,083)
Change in inventories		102	35	9
Internally generated assets	30	570	626	639
Depreciation and amortization	31	(4,255)	(4,473)	(4,291)
Gains (losses) on disposals of non-current assets	32	(1)	11	14
Impairment reversals (losses) on non-current assets	33	(2,586)	(37)	(3)
Operating profit (loss)		**561**	**3,291**	**3,722**
Share of profits (losses) of associates and joint ventures accounted for using the equity method	8	(1)	(1)	(23)
Other income (expenses) from investments	34	11	(18)	7
Finance income	35	1,056	1,808	2,543
Finance expenses	35	(2,404)	(3,303)	(3,450)
Profit (loss) before tax from continuing operations		**(777)**	**1,777**	**2,799**
Income tax expense	11	(375)	(490)	(880)
Profit (loss) from continuing operations		**(1,152)**	**1,287**	**1,919**
Profit (loss) from Discontinued operations/Non-current assets held for sale	14	—	—	47
Profit (loss) for the year	36	**(1,152)**	**1,287**	**1,966**
Attributable to:				
Owners of the Parent		*(1,411)*	*1,121*	*1,808*
Non-controlling interests		*259*	*166*	*158*

		Year ended December 31, 2018	2017	2016
			(Euros)	
Basic Earnings Per Share (EPS)	37			
Ordinary Share		(0.07)	0.05	0.08
Savings Share		(0.07)	0.06	0.09
Of which:				
From continuing operations attributable to Owners of the Parent				
Ordinary Share		*(0.07)*	*0.05*	*0.08*
Savings Share		*(0.07)*	*0.06*	*0.09*
Diluted Earnings Per Share (EPS)	37			
Ordinary Share		(0.06)	0.05	0.08
Savings Share		(0.06)	0.06	0.09
Of which:				
From continuing operations attributable to Owners of the Parent				
Ordinary Share		*(0.06)*	*0.05*	*0.08*
Savings Share		*(0.06)*	*0.06*	*0.09*

The accompanying notes are an integral part of these consolidated financial statements

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2018, 2017 AND 2016 (see Note 15)

		Year ended December 31,		
		2018	2017	2016
		(millions of euros)		
Profit (loss) for the year	**(A)**	**(1,152)**	**1,287**	**1,966**
Other components of the Consolidated Statement of Comprehensive Income				
Other components that will not be reclassified subsequently to Separate Consolidated Income Statement				
Financial assets measured at fair value through other comprehensive income:				
Profit (loss) from fair value adjustments		(5)	—	—
Income tax effect		—	—	—
	(B)	**(5)**	**—**	**—**
Remeasurements of employee defined benefit plans (IAS19):				
Actuarial gains (losses)		19	10	(33)
Income tax effect		(5)	(1)	7
	(C)	**14**	**9**	**(26)**
Share of other comprehensive income (loss) of associates and joint ventures accounted for using the equity method:				
Profit (loss)		—	—	—
Income tax effect		—	—	—
	(D)	**—**	**—**	**—**
Total other components that will not be reclassified subsequently to Separate Consolidated Income Statement	**E=(B+C+D)**	**9**	**9**	**(26)**
Other components that will be reclassified subsequently to Separate Consolidated Income Statement				
Financial assets measured at fair value through other comprehensive income (*):				
Profit (loss) from fair value adjustments		(14)	63	46
Loss (profit) transferred to Separate Consolidated Income Statement		(4)	(62)	(37)
Income tax effect		2	2	(2)
	(F)	**(16)**	**3**	**7**
Hedging instruments:				
Profit (loss) from fair value adjustments		362	(854)	(312)
Loss (profit) transferred to Separate Consolidated Income Statement		(336)	826	(80)
Income tax effect		(7)	(3)	90
	(G)	**19**	**(31)**	**(302)**
Exchange differences on translating foreign operations:				
Profit (loss) on translating foreign operations		(554)	(830)	852
Loss (profit) on translating foreign operations transferred to Separate Consolidated Income Statement		—	19	304
Income tax effect		—	—	—
	(H)	**(554)**	**(811)**	**1,156**
Share of other comprehensive income (loss) of associates and joint ventures accounted for using the equity method:				
Profit (loss)		—	—	—
Loss (profit) transferred to Separate Consolidated Income Statement		—	—	—
Income tax effect		—	—	—
	(I)	**—**	**—**	**—**
Total other components that will be reclassified subsequently to Separate Consolidated Income Statement	**(K=F+G+H+I)**	**(551)**	**(839)**	**861**
Total other components of the Consolidated Statement of Comprehensive Income	**(M=E+K)**	**(542)**	**(830)**	**835**
Total comprehensive income (loss) for the year	**(A+M)**	**(1,694)**	**457**	**2,801**
Attributable to:				
Owners of the Parent		*(1,784)*	*527*	*2,534*
Non-controlling interests		*90*	*(70)*	*267*

(*) Including, for 2017 and 2016, "available-for-sale financial assets".

The accompanying notes are an integral part of these consolidated financial statements

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY FOR THE YEARS ENDED DECEMBER 31, 2018, 2017 AND 2016

- **CHANGES IN EQUITY IN 2016 (see Note 15)**

	Share capital	Additional paid-in capital	Reserve for available-for-sale financial assets	Reserve for hedging instruments	Reserve for exchange differences on translating foreign operations	Reserve for remeasurements of employee defined benefit plans (IAS 19)	Share of other comprehensive income (loss) of associates and joint ventures accounted for using the equity method	Sundry reserves and retained earnings (accumulated losses), including profit (loss) for the year	Equity attributable to owners of the Parent	Non-controlling interests	Total Equity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i=a+b+c+d+e+f+g+h)	(l)	(i+l)
						(millions of euros)					
Balance at December 31, 2015	**10,650**	**1,731**	**32**	**(249)**	**(1,413)**	**(87)**	**—**	**6,890**	**17,554**	**3,695**	**21,249**
Changes in equity in the year ended December 31, 2016:											
Dividends approved								(166)	(166)	(38)	(204)
Total comprehensive income (loss) for the year			7	(302)	1,047	(26)		1,808	2,534	267	2,801
Disposal of the Sofora—Telecom Argentina group									—	(1,582)	(1,582)
Conversion of the Guaranteed Subordinated Mandatory Convertible Bonds due 2016	937	363							1,300		1,300
Grant of equity instruments								1	1		1
Other changes								(16)	(16)	4	(12)
Balance at December 31, 2016	**11,587**	**2,094**	**39**	**(551)**	**(366)**	**(113)**	**—**	**8,517**	**21,207**	**2,346**	**23,553**

The accompanying notes are an integral part of these consolidated financial statements

• CHANGES IN EQUITY IN 2017 (See Note 15)

	Share capital	Additional paid-in capital	Reserve for available-for-sale financial assets	Reserve for hedging instruments	Reserve for exchange differences on translating foreign operations	Reserve for remeasurements of employee defined benefit plans (IAS 19)	Share of other comprehensive income (loss) of associates and joint ventures accounted for using the equity method	Sundry reserves and retained earnings (accumulated losses), including profit (loss) for the year	Equity attributable to owners of the Parent	Non-controlling interests	Total Equity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i=a+b+c+d+e+f+g+h)	(l)	(i+l)
							(millions of euros)				
Balance at December 31, 2016	**11,587**	**2,094**	**39**	**(551)**	**(366)**	**(113)**	**—**	**8,517**	**21,207**	**2,346**	**23,553**
Changes in equity in the year ended December 31, 2017:											
Dividends approved								(166)	(166)	(64)	(230)
Total comprehensive income (loss) for the year			3	(31)	(575)	9		1,121	527	(70)	457
Grant of equity instruments								(6)	(6)		(6)
Other changes					**(14)**			9	(5)	14	9
Balance at December 31, 2017	**11,587**	**2,094**	**42**	**(582)**	**(955)**	**(104)**	**—**	**9,475**	**21,557**	**2,226**	**23,783**

The accompanying notes are an integral part of these consolidated financial statements

• CHANGES IN EQUITY IN 2018 (see Note 15)

	Share capital	Additional paid-in capital	Reserve for financial assets measured at fair value through other comprehensive income (*)	Reserve for hedging instruments	Reserve for exchange differences on translating foreign operations	Reserve for remeasurements of employee defined benefit plans (IAS 19)	Share of other comprehensive income (loss) of associates and joint ventures accounted for using the equity method	Sundry reserves and retained earnings (accumulated losses), including profit (loss) for the year	Equity attributable to owners of the Parent	Non-controlling interests	Total Equity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i=a+b+c+d+e+f+g+h)	(l)	(i+l)
							(millions of euros)				
Balance at December 31, 2017	**11,587**	**2,094**	**42**	**(582)**	**(955)**	**(104)**	**—**	**9,475**	**21,557**	**2,226**	**23,783**
Adoption of IFRS 15 and IFRS 9			9		—			(92)	(83)	(5)	(88)
Adjusted Balance at December 31, 2017	**11,587**	**2,094**	**51**	**(582)**	**(955)**	**(104)**	**—**	**9,383**	**21,474**	**2,221**	**23,695**
Changes in equity in the year ended December 31, 2018:											
Dividends approved								(166)	(166)	(115)	(281)
Total comprehensive income (loss) for the period			(21)	19	(385)	14		(1,411)	(1,784)	90	(1,694)
Grant of equity instruments								2	2		2
Other changes								2	2	23	25
Balance at December 31, 2018	**11,587**	**2,094**	**30**	**(563)**	**(1,340)**	**(90)**	**—**	**7,810**	**19,528**	**2,219**	**21,747**

(*) The balance at December 31, 2017 includes the "Reserve for available-for-sale financial assets".

The accompanying notes are an integral part of these consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2018, 2017 AND 2016

	Note	Year ended December 31, 2018	2017	2016
		(millions of euros)		
CASH FLOWS FROM OPERATING ACTIVITIES:				
Profit (loss) from continuing operations		(1,152)	1,287	1,919
Adjustments for:				
Depreciation and amortization		4,255	4,473	4,291
Impairment losses (reversals) on non-current assets (including investments)		2,589	50	6
Net change in deferred tax assets and liabilities		(195)	(147)	38
Losses (gains) realized on disposals of non-current assets (including investments)		1	(11)	(15)
Share of losses (profits) of associates and joint ventures accounted for using the equity method		1	1	23
Change in provisions for employee benefits		(208)	437	(131)
Change in inventories		(99)	(30)	(10)
Change in trade receivables and net amounts due from customers on construction contracts		(49)	379	(310)
Change in trade payables		(163)	(605)	229
Net change in current income tax receivables/payables		(210)	(515)	581
Net change in miscellaneous receivables/payables and other assets/liabilities		(178)	80	(915)
CASH FLOWS FROM (USED IN) OPERATING ACTIVITIES (A)		**4,592**	**5,399**	**5,706**
CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchase of intangible assets	6	(3,647)	*(2,292)*	*(1,641)*
Purchase of tangible assets	7	*(2,831)*	*(3,477)*	*(3,467)*
Total purchase of intangible and tangible assets on an accrual basis		(6,478)	(5,769)	(5,108)
Change in amounts due for purchases of intangible and tangible assets		*1,947*	*455*	*450*
Total purchase of intangible and tangible assets on a cash basis		(4,531)	(5,314)	(4,658)
Capital grants received		108	82	
Acquisition of control of companies or other businesses, net of cash acquired		—	—	(10)
Acquisitions/disposals of other investments		(3)	(4)	(5)
Change in financial receivables and other financial assets (excluding hedging and non-hedging derivatives under financial assets)		96	466	175
Proceeds from sale that result in a loss of control of subsidiaries or other businesses, net of cash disposed of		—	—	492
Proceeds from sale/repayments of intangible, tangible and other non-current assets		16	30	42
CASH FLOWS FROM (USED IN) INVESTING ACTIVITIES (B)		**(4,314)**	**(4,740)**	**(3,964)**
CASH FLOWS FROM FINANCING ACTIVITIES:				
Change in current financial liabilities and other		394	(1,188)	(437)
Proceeds from non-current financial liabilities (including current portion)		2,546	2,630	3,561
Repayments of non-current financial liabilities (including current portion)		(4,426)	(3,426)	(4,164)
Changes in hedging and non-hedging derivatives		(110)	997	
Share capital proceeds/reimbursements (including subsidiaries)		22	16	4
Dividends paid		(256)	(235)	(227)
Changes in ownership interests in consolidated subsidiaries		—	(4)	—
CASH FLOWS FROM (USED IN) FINANCING ACTIVITIES (C)		**(1,830)**	**(1,210)**	**(1,263)**
CASH FLOWS FROM (USED IN) DISCONTINUED OPERATIONS/NON-CURRENT ASSETS HELD FOR SALE (D)	14	**—**	**—**	**(45)**
AGGREGATE CASH FLOWS (E=A+B+C+D)		**(1,552)**	**(551)**	**434**
NET CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR (F)		**3,246**	**3,952**	**3,216**
Net foreign exchange differences on net cash and cash equivalents (G)		**(63)**	**(155)**	**302**
NET CASH AND CASH EQUIVALENTS AT END OF THE YEAR (H=E+F+G)		**1,631**	**3,246**	**3,952**

The accompanying notes are an integral part of these consolidated financial statements

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
ADDITIONAL CASH FLOW INFORMATION:			
Income taxes (paid) received	(739)	(1,100)	(218)
Interest expense paid	(1,978)	(2,899)	(2,306)
Interest income received	871	1,636	934
Dividends received	2	1	8
ANALYSIS OF NET CASH AND CASH EQUIVALENTS:			
NET CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR:			
Cash and cash equivalents—from continuing operations	3,575	3,964	3,559
Bank overdrafts repayable on demand—from continuing operations	(329)	(12)	(441)
Cash and cash equivalents—from Discontinued operations/Non-current assets held for sale	—	—	98
Bank overdrafts repayable on demand—from Discontinued operations/Non-current assets held for sale	—	—	—
	3,246	**3,952**	**3,216**
NET CASH AND CASH EQUIVALENTS AT END OF THE YEAR:			
Cash and cash equivalents—from continuing operations	1,917	3,575	3,964
Bank overdrafts repayable on demand—from continuing operations	(286)	(329)	(12)
Cash and cash equivalents—from Discontinued operations/Non-current assets held for sale	—	—	—
Bank overdrafts repayable on demand—from Discontinued operations/Non-current assets held for sale	—	—	—
	1,631	**3,246**	**3,952**

The accompanying notes are an integral part of these consolidated financial statements

NOTE 1—FORM, CONTENT AND OTHER GENERAL INFORMATION

Form and content

Telecom Italia S.p.A. (the "Parent"), also known in short as "TIM S.p.A.", and its subsidiaries form the "TIM Group" or the "Group".

TIM is a joint-stock company (S.p.A.) organized under the laws of the Republic of Italy.

The registered offices of the Parent, TIM, are located in Milan, Italy at Via Gaetano Negri 1.

The duration of TIM S.p.A., as stated in the company's bylaws, extends until December 31, 2100.

On May 16, 2018, the Board of Directors of TIM S.p.A. acknowledged that the grounds for considering Vivendi the entity exercising direction and coordination powers over TIM no longer applied. Subsequently, on June 25, 2018, the Board of Directors approved amendments to the internal procedure governing transactions with related parties, and updated the relative related party boundary to reflect the new situation, whereby Vivendi no longer qualifies as the de facto controlling entity over TIM.

The TIM Group operates mainly in Europe, the Mediterranean Basin and South America.

The Group is engaged principally in the communications sector and, particularly, the fixed and mobile national and international telecommunications sector.

The TIM Group Consolidated Financial Statements at December 31, 2018 have been prepared on a going concern basis (further details are provided in the Note "Accounting Policies") and in accordance with the International Financial Reporting Standards issued by the International Accounting Standards Board (designated as "**IFRS**").

Furthermore, during 2018, the Group applied accounting policies consistent with those applied for the previous year, except for the new accounting standards adopted as of January 1, 2018, the impact of which is illustrated in the section "Adoption of the new IFRS 9 and IFRS 15 standards", to which readers are referred for more details.

The consolidated financial statements have been prepared under the historical cost convention except for financial assets measured at fair value through other comprehensive income, financial assets measured at fair value through profit or loss and derivative financial instruments which have been measured at fair value. The carrying amounts of hedged assets and liabilities have been adjusted to reflect the changes in fair value of the hedged risks (fair value hedge).

In accordance with IAS 1 (Presentation of Financial Statements) comparative information included in the consolidated financial statements is, unless otherwise indicated, that of the preceding two years.

The TIM Group consolidated financial statements as at December 31, 2018 are expressed in euro (rounded to the nearest million unless otherwise indicated).

Publication of the TIM Group consolidated financial statements for the year ended December 31, 2018 was approved by resolution of the Board of Directors' meeting held on February 21, 2019.

Financial statement formats

The financial statement formats adopted are consistent with those indicated in IAS 1. In particular:

- the consolidated statements of financial position have been prepared by classifying assets and liabilities according to the "current and non-current" criterion;
- the separate consolidated income statements have been prepared by classifying operating expenses by nature of expense as this form of presentation is considered more appropriate and representative of the specific business of the Group, conforms to internal reporting and is in line with the TIM Group's industrial sector;

- the Consolidated statements of comprehensive income include the profit or loss for the year as shown in the separate consolidated income statements and all other non-owner changes in equity;
- the Consolidated statements of cash flows have been prepared by presenting cash flows from operating activities according to the "indirect method", as permitted by IAS 7 (Statement of Cash Flows).

Furthermore, according to IAS 1 (paragraphs 97 and 98), certain expense and income items that are material in terms of nature and amount are separately disclosed in the notes to the separate consolidated income statement. Specifically, such items include: income/expenses arising from the disposal of property, plant and equipment, business segments and investments; expenses stemming from company reorganization and streamlining processes and projects, also in connection with corporate transactions (mergers, spin-offs, etc.); expenses resulting from litigation and regulatory fines and related liabilities; other provisions and related reversals; costs for the settlement of disputes; items related to corrections and re-alignments relating to previous years; impairment losses on goodwill and/or other tangible and intangible assets.

Segment Reporting

An operating segment is a component of an entity:

- that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the same entity);
- whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources (for the TIM Group, the Board of Directors of the Parent) to be allocated to the segment and assess its performance; and
- for which discrete financial information is available.

In particular, the operating segments of the TIM Group are organized according to geographic location (Domestic and Brazil) for the telecommunications business.

The Sofora-Telecom Argentina group, which was sold on March 8, 2016, has been recognized under Discontinued operations.

The term "operating segment" is considered synonymous with "Business Unit".

The operating segments of the TIM Group are as follows:

- **Domestic**: includes operations in Italy for voice and data services on fixed and mobile networks for end customers (retail) and other operators (wholesale), the operations of the Telecom Italia Sparkle group (International wholesale), which, at international level (Europe, the Mediterranean and South America), develops fiber optic networks for wholesale customers, the operations of Olivetti (products and services for Information Technology), as well as INWIT S.p.A. (a company operating in the electronic communications infrastructure sector, and in particular the infrastructure for hosting radio transmission equipment for mobile telephone networks, both for TIM and other operators) and the units supporting the Domestic sector;
- **Brazil**: includes mobile fixed telecommunications operations in Brazil (Tim S.A.);
- **Other Operations**: includes finance companies and other minor companies not strictly related to the core business of the TIM Group.

NOTE 2—ACCOUNTING POLICIES

Going concern

The consolidated financial statements for 2018 have been prepared on a going concern basis as there is the reasonable expectation that TIM will continue its operational activities in the foreseeable future (and in any event with a time horizon of at least twelve months).

In particular, the following factors have been taken into consideration:

- the main risks and uncertainties (that are for the most part of an external nature) to which the Group and the various activities of the TIM Group are exposed:
  - changes in the general macroeconomic situation in the Italian, European and Brazilian markets, as well as the volatility of financial markets in the Eurozone also as a result of the "Brexit" referendum in the United Kingdom;
  - variations in business conditions, also related to competition;
  - changes to laws and regulations (price and rate variations);
  - outcomes of legal disputes and proceedings with regulatory authorities, competitors and other parties;
  - financial risks (interest rate and/or exchange rate trends, changes in the Group's credit rating by rating agencies);
- the optimal mix between risk capital and debt capital as well as the policy for the remuneration of risk capital, as described in the paragraph "Share capital information" under the Note "Equity";
- the policy for financial risk management (market risk, credit risk and liquidity risk), as described in the Note "Financial risk management".

Based on these factors, the Management believes that, at the present time, there are no elements of uncertainty regarding the Group's ability to continue as a going concern.

Principles of consolidation

The consolidated financial statements include the financial statements of all subsidiaries from the date control over such subsidiaries commences until the date that control ceases.

The date of all the subsidiaries' financial statements coincides with that of the Parent TIM.

Control exists when the Parent TIM S.p.A. has all the following:

- power over the investee, which includes the ability to direct the relevant activities of the investee, i.e. the activities that significantly affect the investee's returns;
- exposure, or rights, to variable returns from its involvement with the investee;
- the ability to use its power over the investee to affect the amount of the investor's returns.

TIM assesses whether it controls an investee if facts and circumstances indicate that there are changes in one or more of the three control elements.

In the preparation of the consolidated financial statements, assets, liabilities, revenues and expenses of the consolidated companies are consolidated on a line-by-line basis and non-controlling interests in equity and in the profit (loss) for the year are disclosed separately under appropriate items, respectively, in the consolidated statements of financial position, in the separate consolidated income statements and in the consolidated statements of comprehensive income.

Under IFRS 10 (Consolidated financial statements), the total comprehensive loss (including the profit or loss for the year) is attributed to the owners of the parent and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

All intragroup balances and transactions and any gains and losses arising from intragroup transactions are eliminated in consolidation.

The carrying amount of the investment in each subsidiary is eliminated against the corresponding share of equity in each subsidiary, after adjustment, if any, to fair value at the acquisition date of control. At that date, goodwill is recorded as an intangible asset, as described below, whereas any gain from a bargain purchase or negative goodwill is recognized in the separate consolidated income statements.

Assets and liabilities of foreign consolidated subsidiaries expressed in currencies other than euro are translated using the exchange rates in effect at the statement of financial position date (the current method); income and expenses are translated at the average exchange rates for the year. Exchange differences resulting from the application of this method are classified as equity until the entire disposal of the investment or upon loss of control of the foreign subsidiary. Upon partial disposal, without losing control, the proportionate share of the cumulative amount of exchange differences related to the disposed interest is recognized in non-controlling interests. The cash flows of foreign consolidated subsidiaries expressed in currencies other than Euro included in the consolidated statements of cash flows are translated into Euro at the average exchange rates for the year.

Goodwill and fair value adjustments arising from the allocation of the purchase price of a foreign entity are recorded in the relevant foreign currency and are translated using the year-end exchange rate.

Under IFRS 10, changes in a parent's ownership interest in a subsidiary that do not result in a loss or acquisition of control are accounted for as equity transactions. In such circumstances the carrying amounts of the controlling and non-controlling interests shall be adjusted to reflect the changes in their relative interests in the subsidiary. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received shall be recognized directly in equity and attributed to the owners of the Parent.

Under IFRS 10, the parent company in case of loss of control of a subsidiary:

derecognizes:

- the assets (including any goodwill) and the liabilities;
- the carrying amount of any non-controlling interests;

recognizes:

- the fair value of the consideration received, if any, from the transaction;
- any investment retained in the former subsidiary at its fair value at the date when control is lost;
- any gain or loss, resulting from the transaction, in the separate consolidated income statements;
- the reclassification to the separate consolidated income statements, of the amounts previously recognized in other comprehensive income in relation to the subsidiary.

In the consolidated financial statements, investments in associates and joint ventures are accounted for using the equity method, as provided, respectively, by IAS 28 (Investments in Associates and Joint Ventures) and IFRS 11 (Joint Arrangements).

Associates are enterprises in which the Group holds at least 20% of the voting rights or exercises significant influence, but no control or joint control over the financial and operating policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

Associates and joint ventures are included in the consolidated financial statements from the date that significant influence or joint control commences until the date such significant influence or joint control ceases.

Under the equity method, on initial recognition the investment in an associate or a joint venture is recognized at cost, and the carrying amount is increased or decreased to recognize the investor's share of the profit or loss of the investee after the date of acquisition. The investor's share of the investee's profit or loss is recognized in the investor's income statements. Dividends received from an investee reduce the carrying amount of the investment.

Adjustments to the carrying amount may also be necessary for changes in the investee's other comprehensive income (i.e. those arising from foreign exchange translation differences). The investor's share of those changes is recognized in the investor's other comprehensive income.

If an investor's share of losses of an associate or a joint venture equals or exceeds its interest in the associate or joint venture, the investor discontinues recognizing its share of further losses. After the investor's interest is reduced to zero, additional losses are provided for, and a liability is recognized, only to the extent that the investor has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture. If the associate or joint venture subsequently reports profits, the investor resumes recognizing its share of those profits only after its share of the profits equals the share of losses not recognized.

Gains and losses resulting from "upstream" and "downstream" transactions between an investor (including its consolidated subsidiaries) and its associate or joint venture are recognized in the investor's financial statements only to the extent of unrelated investors' interests in the associate or joint venture.

Gains and losses arising from transactions with associates or joint ventures are eliminated to the extent of the Group's interest in those entities.

Intangible assets

Goodwill

Under IFRS 3 (*Business Combinations*), goodwill is recognized as of the acquisition date of control and measured as the excess of (a) over (b) below:

a) the aggregate of:

- the consideration transferred (measured in accordance with IFRS 3; it is generally recognized on the basis of the acquisition date fair value);
- the amount of any non-controlling interest in the acquiree measured at the non-controlling interest's proportionate share of the acquiree's identifiable net assets at the acquisition date fair value;
- in a business combination achieved in stages, the acquisition date fair value of the acquirer's previously held equity interest in the acquiree;

b) the acquisition date fair value of the identifiable assets acquired net of the identifiable liabilities assumed measured at the acquisition date of control.

IFRS 3 requires, *inter alia*, the following:

- incidental costs incurred in connection with a business combination are charged to the separate consolidated income statement;
- in a business combination achieved in stages, the acquirer shall remeasure its previously held equity interest in the acquiree at its fair value at the acquisition date of control and recognize the resulting gain or loss, if any, in the separate consolidated income statement.

Goodwill is classified in the statement of financial position as an intangible asset with an indefinite useful life.

Goodwill initially recorded is subsequently reduced only for impairment losses. Further details are provided in the accounting policy Impairment of tangible and intangible assets—Goodwill, reported below. In case of loss of control of a subsidiary, the relative amount of goodwill is taken into account in calculating the gain or loss on disposal.

Development costs

Costs incurred internally for the development of new products and services represent either intangible assets (mainly costs for software development) or tangible assets. These costs are capitalized only when all the following conditions are satisfied: i) the cost attributable to the development phase of the asset can be measured reliably,

ii) there is the intention, the availability of financial resources and the technical ability to complete the asset and make it available for use or sale and iii) it can be demonstrated that the asset will be able to generate future economic benefits. Capitalized development costs comprise only expenditures that can be attributed directly to the development process for new products and services.

Capitalized development costs are amortized systematically over the estimated product or service life so that the amortization method reflects the way which the asset's future economic benefits are expected to be consumed by the entity.

Other intangible assets with a finite useful life

Other purchased or internally-generated intangible assets with a finite useful life are recognized as assets, in accordance with IAS 38 (Intangible Assets), where it is probable that the use of the asset will generate future economic benefits and where the cost of the asset can be measured reliably.

Such assets are recorded at purchase or production cost and amortized on a straight-line basis over their estimated useful lives; the amortization rates are reviewed annually and revised if the current estimated useful life is different from that estimated previously. The effect of such changes is recognized prospectively in the separate consolidated income statements.

Tangible assets

Property, plant and equipment owned

Property, plant and equipment owned is stated at acquisition or production cost. Subsequent expenditures are capitalized only if they increase the future economic benefits embodied in the related item of property, plant and equipment. All other expenditures are expensed as incurred.

Cost also includes the expected costs of dismantling the asset and restoring the site if a legal or constructive obligation exists. The corresponding liability is recognized at its present value as a provision in the statement of financial position. These capitalized costs are depreciated and charged to the separate consolidated income statements over the useful life of the related tangible assets.

The recalculation of estimates for dismantling costs, discount rates and the dates in which such costs are expected to be incurred is reviewed annually, at each financial year-end. Changes in the above liability must be recognized as an increase or decrease of the cost of the relative asset; the amount deducted from the cost of the asset must not exceed its carrying amount. The excess if any, should be recorded immediately in the separate consolidated income statements, conventionally under the line item "Depreciation".

Depreciation of property, plant and equipment owned is calculated on a straight-line basis over the estimated useful life of the assets.

The depreciation rates are reviewed annually and revised if the current estimated useful life is different from that estimated previously. The effect of such changes is recognized prospectively in the separate consolidated income statements.

Land, including land pertaining to buildings, is not depreciated.

Assets held under finance leases

Assets held under finance leases, in which substantially all the risks and rewards of ownership are transferred to the Group, are initially recognized as assets of the Group at fair value or, if lower, at the present value of the minimum lease payments, including bargain purchase options. The corresponding liability due to the lessor is included in the statement of financial position under financial liabilities.

Lease payments are apportioned between interest (recognized in the separate consolidated income statements) and principal (recognized as a deduction from liabilities). This split is determined so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Furthermore, gains realized on sale and leaseback transactions that are recorded under finance lease contracts are deferred over the lease term.

The depreciation policy for depreciable assets held under finance leases is consistent with that for depreciable assets that are owned. If there is no reasonable certainty over the acquisition of the ownership of the asset at the end of the lease period, assets held under finance leases are depreciated over the shorter of the lease term and their useful lives.

Leases where the lessor retains substantially all the risks and rewards of ownership of the assets are accounted for as operating leases. Operating lease rentals are charged to the separate consolidated income statements on a straight-line basis over the lease term.

When a lease includes both land and buildings, an entity assesses the classification of each element as a finance or an operating lease separately.

Capitalized borrowing costs

Under IAS 23 (*Borrowing Costs*), the Group capitalizes borrowing costs only if they are directly attributable to the acquisition, construction or production of a qualifying asset that takes a substantial period of time (conventionally more than 12 months) to get ready for its intended use or sale.

Capitalized borrowing costs are recorded in the separate consolidated income statements and deducted directly from the "finance expense" line item to which they relate.

Impairment of intangible and tangible assets

Goodwill

Goodwill is tested for impairment at least annually or more frequently whenever events or changes in circumstances indicate that goodwill may be impaired, as set forth in IAS 36 (*Impairment of Assets*); however, when the conditions that gave rise to an impairment loss no longer exist, the original amount of goodwill is not reinstated.

The test is generally conducted at the end of every year so the date of testing is the year-end closing date of the financial statements. Goodwill acquired and allocated during the year is tested for impairment at the end of the year in which the acquisition and allocation took place.

To test for impairment, goodwill is allocated at the date of acquisition to each cash-generating unit or group of cash-generating units which is expected to benefit from the acquisition.

If the carrying amount of the cash-generating unit (or group of cash-generating units) exceeds the recoverable amount, an impairment loss is recognized in the separate consolidated income statements. The impairment loss is first recognized as a deduction of the carrying amount of goodwill allocated to the cash-generating unit (or group of cash-generating units) and then only applied to the other assets of the cash-generating unit in proportion to their carrying amount, up to the recoverable amount of the assets with a finite useful life. The recoverable amount of a cash-generating unit (or group of cash-generating units) to which goodwill is allocated is the higher of fair value less costs to sell and its value in use.

In calculating the value in use, the estimated future cash flows are discounted to present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. The future cash flows are those arising from an explicit time horizon between three and five years as well as those extrapolated to estimate the terminal value. The long-term growth rate used to estimate the terminal value of the cash-generating unit (or group of cash-generating units) is assumed not to be higher than the average long-term growth rate of the segment, country or market in which the cash-generating unit (or group of cash-generating units) operates.

The value in use of cash-generating units denominated in foreign currency is estimated in the local currency by discounting cash flows to present value on the basis of an appropriate rate for that currency. The present value obtained is translated to euro at the spot rate on the date of the impairment test (in the case of the TIM Group, the date of the financial statements).

Future cash flows are estimated by referring to the current operating conditions of the cash generating unit (or group of cash-generating units) and, therefore, do not include either benefits originating from future restructuring for which the entity is not yet committed, or future investments for the improvement or optimization of the cash-generating unit.

For the purpose of calculating impairment, the carrying amount of the cash-generating unit is established based on the same criteria used to determine the recoverable amount of the cash generating unit, excluding surplus assets (that is, financial assets, deferred tax assets and net non-current assets held for sale) and includes the goodwill attributable to non-controlling interests.

After conducting the goodwill impairment test for the cash-generating unit (or groups of cash-generating units), a second level of impairment testing is carried out which includes the corporate assets which do not generate positive cash flows and which cannot be allocated by a reasonable and consistent criterion to the single units. At this second level, the total recoverable amount of all cash-generating units (or groups of cash-generating units) is compared to the carrying amount of all cash-generating units (or groups of cash-generating units), including also those cash-generating units to which no goodwill was allocated, and the corporate assets.

Intangible and tangible assets with a finite useful life

At every closing date, the Group assesses whether there are any indications of impairment of intangible and tangible assets with a finite useful life. Both internal and external sources of information are used for this purpose. Internal sources include obsolescence or physical damage, and significant changes in the use of the asset and the economic performance of the asset compared to estimated performance. External sources include the market value of the asset, changes in technology, markets or laws, trend in market interest rates and the cost of capital used to evaluate investments, and an excess of the carrying amount of the net assets of the Group over market capitalization.

When indicators of impairment exist, the carrying amount of the assets is reduced to the recoverable amount. The recoverable amount of an asset is the higher of fair value less costs to sell and its value in use. In calculating the value in use, the estimated future cash flows are discounted to present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Where 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. Impairment losses are recognized in the separate consolidated income statements.

When the conditions that gave rise to an impairment loss no longer exist, the carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, up to the carrying amount that would have been recorded had no impairment loss been recognized. The reversal of an impairment loss is recognized as income in the separate consolidated income statements.

Financial instruments

Business models for managing the financial assets

Under IAS 39, financial assets were classified and measured according to the categories established by IAS 39 (Loans and Receivables, Financial assets Held-to-Maturity, Available for Sale Financial assets, Financial Assets/ Liabilities Held for Trading).

Under IFRS 9, the business models for financial assets (other than trade receivables due from customers) have been defined on the basis of how the financial instruments are managed and their cash flows used; this is done to ensure an adequate level of financial flexibility and to best manage, in terms of risks and returns, the financial resources immediately available through the treasuries of Group companies and in accordance with the strategies set forth by the Parent TIM.

As required by IFRS 9, the business models adopted by the TIM Group are:

- *Hold to Collect*: financial instruments used to absorb temporary cash surpluses; such instruments are low risk and mostly held to maturity; and are measured at amortized cost;

- *Hold to Collect and Sell*: monetary or debt instruments used to absorb short/medium-term cash surpluses; such instruments are low risk and generally held to maturity, or otherwise sold to cover specific cash requirements; and are measured at fair value through other consolidated comprehensive income;
- *Hold to Sell*: monetary, debt and equity trading instruments used to dynamically manage cash surpluses not managed under the business models identified above; such instruments are higher risk and traded repeatedly over time; and are measured at fair value through consolidated profit or loss.

The comparison between the new category determined in compliance with IFRS 9 with the original category determined in compliance with IAS 39 as of January 1, 2018 is provided elsewhere herein in Note— Supplementary disclosures on financial instruments.

Other investments

Other investments (other than those in subsidiaries, associates and joint ventures) are classified as non-current or current assets if they will be kept in the Group's portfolio for a period of more or not more than 12 months, respectively.

Other investments (other than those in subsidiaries, associates and joint ventures) are classified in "financial assets measured at fair value through consolidated profit or loss" (FVTPL) as current assets.

At initial recognition of each investment, IFRS 9 provides the irrevocable election of recognizing such investments as "financial assets measured at fair value through other consolidated comprehensive income" (FVTOCI) as non-current or current assets.

Other investments classified as "financial assets measured at fair value through other comprehensive income" are measured at fair value; changes in the fair value of these investments are recognized in a specific equity reserve under the other components of the statements of comprehensive income (*Reserve for financial assets measured at fair value through other comprehensive income*), without reclassification to the separate income statement when the financial asset is disposed of or impaired. Dividends, on the other hand, are recognized in the separate consolidated income statements.

Changes in the value of other investments classified as "financial assets at fair value through profit or loss" are recognized directly in the separate consolidated income statements.

Securities other than investments

Securities other than investments included among non-current or current assets, depending on the business model adopted and the contractual flows envisaged, fall among financial assets measured at amortized cost, or measured at fair value through other comprehensive income or at fair value though profit or loss.

Securities other than investments classified as current assets are those that, by decision of the directors, are intended to be kept in the Group's portfolio for a period of not more than 12 months, and are classified:

- as "financial assets measured at amortized cost" (AC) when held to maturity (originally more than 3 months but less than 12 months, or, with an original maturity of more than 12 months but the remaining maturity at the date of purchase is more than 3 months but less than 12 months);
- as "financial assets measured at fair value through other consolidated comprehensive income" (FVTOCI) when held in the scope of a business model whose objective is to sell the financial asset and/or collect the contractual flows. The "Reserve for financial assets measured at fair value through other consolidated comprehensive income" is reversed to the separate consolidated income statements when the financial asset is disposed of or impaired;
- as "financial assets measured at fair value through consolidated profit or loss" (FVTPL) in the other cases.

Cash and cash equivalents

Cash and cash equivalents are recorded, according to their nature, at nominal value or amortized cost.

Cash equivalents are short-term and highly liquid investments that are readily convertible to known amounts of cash, subject to an insignificant risk of change in value and their original maturity or the remaining maturity at the date of purchase does not exceed 3 months.

Impairment of financial assets

At every closing date, assessments are made as to whether there is any objective evidence that a financial asset or a group of financial assets may be impaired.

Under IAS 39. if any of the above-mentioned evidence exists, an impairment loss is recognized in the separate consolidated income statement for financial assets measured at cost or amortized cost.

Under IFRS 9, the impairment of financial assets is based on the expected credit loss model.

In particular:

- impairment on trade receivables and on contract assets is carried out using the simplified approach that involves estimating the loss expected over the life of the receivable at the time of initial recognition and on subsequent measurements. For each customer segment, the estimate is principally made by calculating the average expected uncollectibility, based on historical and statistical indicators, possibly adjusted using forward-looking elements. For some categories of receivables characterized by specific risk elements, specific measurements are made on individual credit positions;
- impairment on financial assets other than trade receivables is carried out on the basis of a general model which estimates expected credit losses over the following 12 months, or over the residual life of the asset in the event of a substantial increase in its credit risk.

Derivatives

As allowed by IFRS 9, the TIM Group decided to continue to apply the hedge accounting provisions contained in IAS 39, instead of those of IFRS 9.

Derivatives are used by the TIM Group to manage its exposure to exchange rate and interest rate risks and to diversify the parameters of debt so that costs and volatility can be reduced to within pre-established operational limits.

In accordance with IAS 39, derivative financial instruments qualify for hedge accounting only when:

- at the inception of the hedge, the hedging relationship is formally designated and documented;
- the hedge is expected to be highly effective;
- its effectiveness can be reliably measured;
- the hedge is highly effective throughout the financial reporting periods for which it is designated.

All derivative financial instruments are measured at fair value in accordance with IAS 39.

When derivative financial instruments qualify for hedge accounting, the following accounting treatment applies:

- Fair value hedge—Where a derivative financial instrument is designated as a hedge of the exposure to changes in fair value of an asset or liability due to a particular risk, the gain or loss from re-measuring the hedging instrument at fair value is recognized in the separate consolidated income statements. The gain or loss on the hedged item attributable to the hedged risk adjusts the carrying amount of the hedged item and is recognized in the separate consolidated income statements.
- Cash flow hedge—Where a derivative financial instrument is designated as a hedge of the exposure to variability in cash flows of an asset or liability or a highly probable expected transaction, the effective portion of any gain or loss on the derivative financial instrument is recognized directly in a specific equity reserve (Reserve for cash flow hedges). The cumulative gain or loss is removed from equity and

recognized in the separate consolidated income statements at the same time the hedged transaction affects the separate consolidated income statements. The gain or loss associated with the ineffective portion of a hedge is recognized in the separate consolidated income statements immediately. If the hedged transaction is no longer probable, the cumulative gains or losses included in the equity reserve are immediately recognized in the separate consolidated income statements.

If hedge accounting is not appropriate, gains or losses arising from the measurement at fair value of derivative financial instruments are directly recognized in the separate consolidated income statements.

Financial liabilities

Financial liabilities comprise financial debt, including advances received on the assignment of accounts receivable, and other financial liabilities such as derivatives and finance lease obligations.

In accordance with IFRS 9, they also include trade and other payables.

Financial liabilities other than derivatives are initially recognized at fair value and subsequently measured at amortized cost.

Financial liabilities hedged by derivative instruments designed to manage exposure to changes in fair value of the liabilities (fair value hedge derivatives) are measured at fair value in accordance with the hedge accounting principles of IAS 39. Gains and losses arising from re-measurement at fair value, to the extent of the hedged component, are recognized in the separate consolidated income statements and are offset by the effective portion of the gain or loss arising from re-measurement at fair value of the hedging instrument.

Financial liabilities hedged by derivative instruments designed to manage exposure to variability in cash flows (cash flow hedge derivatives) are measured at amortized cost in accordance with the hedge accounting principles of IAS 39.

Sales of receivables

The TIM Group carries out sales of receivables under factoring contracts. These sales, in the majority of cases, are characterized by the transfer of substantially all the risks and rewards of ownership of the receivables to third parties, meeting the requirements of IFRS 9 for derecognition. Specific servicing contracts, through which the buyer confers a mandate to TIM S.p.A. for the collection and management of the receivables, leave the current Company/customer relationship unaffected.

Amounts due from customers on construction contracts

Amounts due from customers on construction contracts, regardless of the duration of the contracts, are recognized in accordance with the percentage of completion method and classified under current assets.

Inventories

Inventories are measured at the lower of purchase and production cost and estimated realizable value; cost is determined on a weighted average basis. Provision is made for obsolete and slow-moving inventories based on their expected future use and estimated realizable value.

Non-current assets held for sale/Discontinued operations

Non-current assets held for sale or disposal groups whose carrying amount will mainly be recovered through sale, rather than through ongoing use, are classified as held for sale and shown separately from other assets and liabilities in the consolidated statements of financial position. The corresponding amounts for the previous year are not reclassified in the consolidated statements of financial position but are instead shown separately in a specific column in the changes in assets and liabilities in the year in which the non-current assets held for sale or the disposal groups are classified as such.

An operating asset sold (*Discontinued Operations*) is a component of an entity that has been disposed of or classified as held for sale and:

- represents a major line of business or geographical area of operations;
- is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations; or
- is a subsidiary acquired exclusively with a view to resale.

The results arising from Discontinued Operations—whether disposed of or classified as held for sale—are shown separately in the separate consolidated income statements, net of tax effects. The corresponding values for the previous periods, where present, are reclassified and reported separately in the separate consolidated income statements, net of tax effects, for comparative purposes.

Non-current assets held for sale or disposal groups classified as held for sale are first recognized in compliance with the appropriate IFRS applicable to the specific assets and liabilities and subsequently measured at the lower of the carrying amount and fair value, less costs to sell.

Any subsequent impairment losses are recognized as a direct adjustment to the non-current assets (or disposal groups) classified as held for sale and expensed in the separate consolidated income statements.

An entity shall recognize a gain for any subsequent increase in fair value less costs to sell of an asset, but not in excess of the cumulative impairment loss that has been recognized.

As required by IFRS 5 (*Non-current assets held for sale and discontinued operations*), an entity shall not depreciate (or amortize) a non-current asset while it is classified as held for sale or while it is part of a disposal group classified as held for sale.

The finance expenses and other expenses attributable to the liabilities of a disposal group classified as held for sale shall continue to be recognized.

Employee benefits

Provision for employee severance indemnity

Employee severance indemnity, mandatory for Italian companies pursuant to Article 2120 of the Italian Civil Code, is deferred compensation and is based on the employees' years of service and the compensation earned by the employee during the service period.

Under IAS 19 (*Employee Benefits*), the employee severance indemnity as calculated is considered a "Defined benefit plan" and the related liability recognized in the statement of financial position (Provision for employee severance indemnities) is determined by actuarial calculations.

The remeasurements of actuarial gains and losses are recognized in other components of comprehensive income. Service cost of Italian companies that employ less than 50 employees, as well as interest expenses related to the "time value" component of the actuarial calculations (the latter classified as Finance expenses), are recognized in the separate consolidated income statements.

Starting from January 1, 2007, Italian Law introduced for employees the choice to direct their accruing indemnity either to supplementary pension funds or leave the indemnity as an obligation of the Company. Companies that employ at least 50 employees should transfer the employee severance indemnity to the "Treasury fund" managed by INPS, the Italian Social Security Institute. Consequently, the Group's obligation to INPS and the contributions to supplementary pension funds take the form, under IAS 19, of a "Defined contribution plan".

Equity compensation plans

The companies of the Group provide additional benefits to certain managers of the Group through equity compensation plans (for example stock options and long-term incentive plans). The above plans are recognized in accordance with IFRS 2 (*Share-Based Payment*).

In accordance with IFRS 2, such plans represent a component of the beneficiaries' compensation. Therefore, for the plans that provide for compensation in equity instruments, the cost is represented by the fair value of such instruments at the grant date, and is recognized in the separate consolidated income statements in "Employee benefits expenses" over the period between the grant date and vesting date with a contra-entry to an equity reserve denominated "Other equity instruments". Changes in the fair value subsequent to the grant date do not affect the initial measurement. At the end of each year, adjustments are made to the estimate of the number of rights that will vest up to expiry. The impact of the change in estimate is deducted from "Other equity instruments" with a contra-entry to "Employee benefits expenses".

For the portion of the plans that provide for the payment of compensation in cash, the amount is recognized in liabilities as a contra-entry to "Employee benefits expenses"; at the end of each year such liability is measured at fair value.

Provisions

The Group records provisions for risks and charges when it has a present obligation, legal or constructive, to a third party, as a result of a past event, when it is probable that an outflow of Group resources will be required to satisfy the obligation and when the amount of the obligation can be estimated reliably.

If the effect of the time value is material, and the payment date of the obligations can be reasonably estimated, provisions to be accrued are the present value of the expected cash flows, taking into account the risks associated with the obligation. The increase in the provision due to the passage of time is recognized in the separate consolidated income statements as "Finance expenses".

Government grants

Government grants are recognized when there is a reasonable assurance that they will be received and that the Group will satisfy all the conditions established for their granting by the government, government entities and equivalent local, national or international entities.

Government grants are recognized in the separate income statement, on a straight-line basis, over the periods in which the Group recognizes the expenses that the grants are intended to offset as costs.

Government grants related to assets received for the acquisition and/or construction of non-current tangible assets are recorded as deferred income in the statement of financial position and credited to the separate income statement on a straight-line basis over the useful life of the plants that the grants relate to.

Treasury shares

Treasury shares are recognized as a deduction from equity. In particular, the treasury shares are reported as a deduction from the share capital issued in the amount corresponding to the "accounting par value", that is the ratio of total share capital and the number of issued shares, while the excess cost of acquisition over the accounting par value is presented as a deduction from "Other reserves and retained earnings (accumulated losses), including profit (loss) for the year".

Foreign currency transactions

Transactions in foreign currencies are recorded at the foreign exchange rate prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated at the foreign exchange rate prevailing at the statement of financial position date. Exchange differences arising from the settlement of monetary items or from their conversion at rates different from those at which they were initially recorded during the year or at the end of the prior year, are recognized in the separate consolidated income statements.

Revenues

Revenues are the gross inflows of economic benefits during the period arising in the course of the ordinary activities of an entity. Amounts collected on behalf of third parties such as sales taxes, goods and services taxes

and value added taxes are not economic benefits which flow to the entity and do not result in increases in equity. Therefore, they are excluded from revenues.

The process underlying recognition of revenues follows the steps set out in IFRS 15:

- **identification of the contract**: takes place when the parties approve the contract (with commercial substance), identify the respective rights and obligations, this means that: the contract must be legally enforceable, the rights to receive goods and/or services and the terms of payment can be clearly identified and the Group deems receipt of payment as probable;
- **identification of the performance obligations**: the main identified performance obligations, namely the promises to transfer goods and services that are distinct, consist of services rendered (including voice and data traffic and ICT solutions) to retail customers, services rendered to wholesale customers and sale of products;
- **determination of the transaction price**: the total amount that has been contracted with the other party regarding the entire contractual term; the Group established that the contractual term is the one arising from the contractual constraints among the parties or, in the absence of such constraints, by convention for service revenue, equal to one month;
- **allocation of the transaction price to the performance obligations**: the allocation is made proportionately to the respective stand-alone selling prices calculated based on the list prices (if present) or estimated by applying an appropriate margin to the cost of purchase/production of the good/service.

  Transaction price related to activating the connectivity service is not a performance obligation; therefore, under IFRS 15, it is allocated to the contractual performance obligations (typically to services). Under IAS 18, they were deferred over the expected duration of the relationship with the customer.

  For offerings which include the sale of devices and service contracts (bundle offerings), according to IFRS 15, the Group allocates the contractual transaction price to the performance obligations of the contract, proportionately to the stand alone selling prices of the single performance obligations. Under IAS 18, revenues were allocated to the handset sale, for the residual of the amount paid by the customer exceeding the services value;
- **recognition of revenues**: revenues are stated net of discounts, allowances, and returns in connection with the characteristics of the type of revenue:
  - **Revenues from services rendered**

    Revenues from services rendered are recognized in the separate income statements according to the stage of completion of the service, that is based on actual consumption.

    Traffic revenues from interconnection and roaming are reported gross of the amounts due to other TLC operators.

    Revenues for delivering information or other content are recognized on the basis of the amount invoiced to the customer, when the service is rendered directly by the Group. In the event that the Group is acting as agent (for example non-geographic numbers) only the commission received from the content provider is recognized as revenue.

    Revenues from prepaid traffic are recorded on the basis of effective consumption. Deferred revenues for traffic already collected but not yet consumed are recorded in "Trade and miscellaneous payables and other current liabilities" in the consolidated statements of financial position.

    Revenues for services rendered are generally invoiced and collected monthly (for retail customers) or in 40-60 days (for wholesale customers).

  - **Revenues from sales**

    Revenues from sales (telephone and other products) are recognized on delivery, which represents the time of control transfer to the customers. The devices sold separately from services are invoiced at the time of delivery; collection takes place on demand or based on installment plans

(up to 48 monthly installments). The devices sold as part of bundle offerings are invoiced at the time of delivery and usually collected in 24 monthly installments.

Some contracts (typically the sale of equipment by instalments) include an implicit financial component, which, if significant, results in a reduction in revenues recognized at the time of sale and the subsequent recognition of financial income at the time of collection of the related instalments; this component is determined by using a discount rate that reflects a hypothetical customer loan transaction at the contract date reflecting the creditworthiness by type of customer. The Group avails itself of the practical expedient of not recognizing said component if it is insignificant or the collection extension is less than 12 months.

Recognition of revenues may result in the recognition of a contract asset or liability. In particular:

- **Contract assets** represent the right to consideration in exchange for goods or services that the Group has transferred to a customer when that right is conditioned on something other than the passage of time.
- **Contract liabilities** represent the obligation to transfer goods or services to a customer for which the Group has received consideration (or the amount is due) from the customer.

Contract costs (incremental costs of obtaining a contract and costs to fulfill a contract; for example, the activation costs and the costs for sales network commissions) are extended and recognized in the consolidated income statements based on the expected term of the contractual relationship with the customers (on average, 3 years for the mobile business and 7 years for the fixed business). The TIM Group makes use of the practical expedient provided for by IFRS 15, which allows the incremental costs of obtaining a contract to be recorded in full in the consolidated income statement, if the period of deferral does not exceed 12 months.

Research costs and advertising expenses

Research costs and advertising expenses are charged directly to the separate consolidated income statements in the year in which they are incurred.

Finance income and expenses

Finance income and expenses are recognized on an accrual basis and include: interest accrued on the related financial assets and liabilities using the effective interest rate method, the changes in fair value of derivatives and other financial instruments measured at fair value through profit or loss, gains and losses on foreign exchange and financial instruments (including derivatives).

Dividends

Dividends received from companies other than subsidiaries, associates and joint ventures are recognized in the separate consolidated income statements in the year in which they become receivable following the resolution by the shareholders' meeting for the distribution of dividends of the investee companies.

Dividends payable to third parties are reported as a change in equity in the year in which they are approved by the shareholders' meeting.

Income Tax Expenses (current and deferred)

Income tax expense includes all taxes calculated on the basis of the taxable income of the companies of the Group.

The income tax expense is recognized in the separate consolidated income statements, except to the extent that they relate to items directly charged or credited to equity, in which case the related tax effect is recognized in the relevant equity reserves. In the Statement of comprehensive income, the amount of income tax expense relating to each item included as "Other components of the Consolidated Statements of Comprehensive income" is indicated.

The income tax expense that could arise on the remittance of a subsidiary's undistributed earnings is only recognized where there is the actual intention to remit such earnings.

Deferred tax liabilities / assets are recognized using the "Balance sheet liability method". They are calculated on all temporary differences that arise between the tax base of an asset or liability and the carrying amounts in the consolidated financial statements, except for non tax-deductible goodwill and for those differences related to investments in subsidiaries which will not reverse in the foreseeable future. Deferred tax assets relating to unused tax loss carryforwards are recognized to the extent that it is probable that future taxable income will be available against which they can be utilized. Current and deferred tax assets and liabilities are offset when the income taxes are levied by the same tax authority and there is a legally enforceable right of offset. Deferred tax assets and liabilities are determined based on enacted tax rates in the respective jurisdictions in which the Group operates that are expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Taxes, other than income taxes, are included in "Other operating expenses".

Earnings per share

Basic earnings per ordinary share is calculated by dividing the Group's profit attributable to ordinary shares by the weighted average number of ordinary shares outstanding during the year, and excluding treasury shares. Similarly, basic earnings per savings share is calculated by dividing the Group's profit attributable to savings shares by the weighted average number of savings shares outstanding during the year.

For diluted earnings per ordinary share, the weighted average number of shares outstanding during the year is adjusted by all dilutive potential shares (for example, the exercise of rights on shares with dilutive effects). The Group profit is also adjusted to reflect the impact of these transactions net of the related tax effects.

Use of estimates

The preparation of consolidated financial statements and related disclosure in conformity with IFRS requires management to make estimates and assumptions based also on subjective judgments, past experience and assumptions considered reasonable and realistic in relation to the information known at the time of the estimate. Such estimates have an effect on the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, as well as the amount of revenues and costs during the year. Actual results could differ, even significantly, from those estimates owing to possible changes in the factors considered in the determination of such estimates. Estimates are reviewed periodically.

The most important accounting estimates which require a high degree of subjective assumptions and judgments are detailed below:

Financial statement line item/area	Accounting estimates
Goodwill impairment	The impairment test on goodwill is carried out by comparing the carrying amount of cash-generating units and their recoverable amount. The recoverable amount of a cash-generating unit is the higher of fair value, less costs to sell, and its value in use. This complex valuation process entails the use of methods such as the discounted cash flow method which uses assumptions to estimate cash flows. The recoverable amount depends significantly on the discount rate used in the discounted cash flow model as well as the expected future cash flows and the growth rate used for the extrapolation. The key assumptions used to determine the recoverable amount for the different cash generating units, including a sensitivity analysis, are detailed in the Note "Goodwill".
Impairment of intangible and tangible assets with a finite useful life	At every closing date, the Group assesses whether there are any indications of impairment of intangible and tangible assets with a finite useful life. Both internal and external sources of information are used for this purpose. Identifying the impairment indicators, estimating the future cash flows and calculating the fair value of each asset requires Management to make significant estimates and assumptions in calculating the discount rate to be used, and the useful

Financial statement line item/area	Accounting estimates
	life and residual value of the assets. These estimates can have a significant impact on the fair value of the assets and on the amount of any impairment write-downs.
Business combinations	The recognition of business combinations requires that assets and liabilities of the acquiree be recorded at their fair value at the acquisition date of control, as well as the possible recognition of goodwill, through the use of a complex process in determining such values.
Capitalization/deferment of costs	The capitalization/deferment of internal and external costs is a process that entails elements of estimation and valuation. Specifically, it involves the valuation of: i) the likelihood that capitalized costs will be recovered through correlated future revenues; and ii) the effective increase in the future economic benefits embodied in the related asset.
Provision for bad debts	Impairment on trade receivables and on the contract assets is carried out using the simplified approach that involves estimating the loss expected over the life of the receivable at the time of initial recognition and on subsequent measurements. For each customer segment, the estimate is principally made by calculating the average expected uncollectibility, based on historical and statistical indicators, possibly adjusted using forward-looking elements. For some categories of receivables characterized by specific risk elements, specific measurements are made on individual credit positions.
Depreciation and amortization	Changes in the economic conditions of the markets, technology and competitive forces could significantly affect the estimated useful lives of tangible and intangible non-current assets and may lead to a difference in the timing, and thus on the amount of depreciation and amortization expense.
Accruals, contingent liabilities and employee benefits	As regards the provisions for restoration costs the estimate of future costs to dismantle tangible assets and restore the site is a complex process that requires an assessment of the liability arising from such obligations which seldom are entirely defined by law, administrative regulations or contract clauses and which normally are to be complied with after an interval of several years. The accruals related to legal, arbitration and fiscal disputes, as well as regulatory proceedings are the result of a complex estimation process based upon the probability of an unfavorable outcome. Employee benefits, especially the provision for employee severance indemnities, are calculated using actuarial assumptions; changes in such assumptions could have a material impact on such liabilities.
Revenues	Recognition of revenues is influenced by the estimated amount of discounts, reductions and refunds to be set off directly against revenues, as well as by the methods for the definition of the stand-alone selling prices of individual products or services and the average contractual durations, in case of renewal options.
Contract costs (IFRS 15)	Recognition of costs of obtaining and to fulfil a contract is affected by the estimate of the expected duration of the relationship with the customer, calculated on the basis of historical turnover. This estimate is subject to fluctuations and could represent in a limited way the future behavior of customers, especially in presence of new commercial offers or changes in the competitive environment.
Income tax expense (current and deferred)	Income taxes (current and deferred) are calculated in each country in which the Group operates according to a prudent interpretation of the tax laws in effect. This process sometimes involves complex estimates to determine taxable income and deductible and taxable temporary differences between the carrying amounts and the taxable amounts. In particular, deferred tax assets are recognized to the extent that future taxable income will be available against which they can be utilized. The

Financial statement line item/area	Accounting estimates
	measurement of the recoverability of deferred tax assets, recognized based on both unused tax loss carry-forwards to future years and deductible differences, takes into account the estimate of future taxable income and is based on conservative tax planning.
Derivative instruments and equity instruments	The fair value of derivative instruments and equity instruments is determined both using valuation models which also take into account subjective measurements such as, for example, cash flow estimates, expected volatility of prices, etc., or on the basis of either prices in regulated markets or quoted prices provided by financial counterparts. For further details, please also see the Note "Supplementary disclosures on financial instruments".

As required by IAS 8 (*Accounting Policies, Changes in Accounting Estimates and Errors*) par. 10, in the absence of a Standard or an Interpretation that specifically applies to a particular transaction, management carefully considers subjective valuation techniques and uses its judgment as to the accounting methods to adopt with a view to providing financial statements which faithfully represent the financial position, the results of operations and the cash flows of the Group, which reflect the economic substance of the transactions, are neutral, prepared on a prudent basis and complete in all material respects.

New Standards and Interpretations issued by IASB and in force from January 1, 2018

In accordance with IAS 8 (*Accounting Policies, Changes in Accounting Estimates and Errors*), the following is a brief description of the IFRS in force commencing as of January 1, 2018. The impacts of the application, as of January 1, 2018, of IFRS 15 (*Revenue from Contracts with Customers*) and IFRS 9 (*Financial Instruments*) are instead reported in the section "Adoption of the New IFRS 9 and IFRS 15 Standards".

IFRIC 22—Foreign Currency Transactions and Advance Consideration

IFRIC 22 clarifies which exchange rate to use in transactions that involve advance consideration paid or received in a foreign currency. The adoption of said interpretation had no impact on these consolidated financial statements at December 31, 2018.

Amendments to IFRS 2 (Share-based Payment)

The amendments concern:

- the fair value measurement of cash-settled share-based payment transactions at the valuation date (i.e., at the grant date, at the reporting date of each accounting period, and at the settlement date), the calculation of which must take into account market conditions (such as the target price of shares) and any other conditions different to the vesting conditions;
- the accounting for equity-settled share-based payment transactions in which the entity acts as a withholding agent for the tax liabilities of the employee (withholding tax);
- the accounting for changes in terms and conditions that entail the reclassification of "cash-settled" share-based payments as "equity-settled" share-based payments.

The adoption of said amendments had no impact on these consolidated financial statements at December 31, 2018.

Improvements to IFRS (2014–2016 cycle)

The amendments clarify that if an investment entity (such as a mutual investment fund or similar entity) elects to measure its investments in associates and joint ventures at fair value through profit or loss (rather than applying the equity method), the election must be applied to each and every investment upon initial recognition. A similar clarification applies to entities that are not investment entities, but which hold investments in associates or joint

ventures that qualify as investment entities. In that case, when applying the equity method, the entities may maintain the fair value measurement through profit or loss made by their investees in associates and joint ventures.

The adoption of said improvements had no impact on these consolidated financial statements at December 31, 2018.

Amendments to IAS 40—Transfers of Investment Property

Amendments to IAS 40 clarifies that an entity may transfer a property to, or from, investment property only when there is evidence of a change in use.

The adoption of said amendments had no impact on these consolidated financial statements at December 31, 2018.

ADOPTION OF THE NEW IFRS 9 AND IFRS 15 STANDARDS

This section provides an overview of the main elements of IFRS 9 (*Financial Instruments*) and IFRS 15 (*Revenue from Contracts with Customers*) and reports the impact of the application of the standards as of January 1, 2018.

IFRS 9 (Financial Instruments)

IFRS 9 (*Financial Instruments*), relates to the classification, measurement, derecognition and impairment of financial assets and liabilities, and hedge accounting.

As permitted by IFRS 9, the TIM Group:

- did not restate the comparative periods in the year of first adoption, considering also the complexity in restatement at the beginning of the first comparative period without the use of hindsight; therefore, the effects deriving from the first adoption of IFRS 9 were recognized in shareholders' equity at January 1, 2018;
- has chosen to continue to apply the hedge accounting requirements of IAS 39, instead of the requirements of IFRS 9.

Commencing as of January 1, 2018, TIM has amended the impairment model applied to financial assets (including trade receivables due from customers), by adopting an expected credit loss model as per IFRS 9, which replaces the incurred loss model required by IAS 39. In application of IFRS 9, the classification (and hence measurement) of financial assets has also been modified and is now based on the entity's business model for managing the financial assets and on the contractual cash flow characteristics of the financial asset. Under IAS 39, financial assets were classified (and hence measured) according to the relative categories prescribed by standard. For further details, please see the Note-Supplementary disclosure on financial instruments.

TIM Management has identified its business models for Group financial assets (other than trade receivables due from customers) on the basis of how the financial instruments are managed and their cash flows used. The purpose of the models is to ensure an adequate level of financial flexibility and to best manage, in terms of risks and returns, the financial resources immediately available to the Group through the treasuries of Group companies and in accordance with the strategies set forth by the Parent TIM.

As required by IFRS 9, the business models adopted by the TIM Group are:

- *Hold to Collect*: financial instruments used to absorb temporary cash surpluses; such instruments are low risk and mostly held to maturity; and are measured at amortized cost;
- *Hold to Collect and Sell*: monetary or debt instruments used to absorb short/medium-term cash surpluses; such instruments are low risk and generally held to maturity, or otherwise sold to cover specific cash requirements; and are measured at fair value through other comprehensive income;
- *Hold to Sell*: monetary and debt instruments used to dynamically manage cash surpluses not managed under the business models identified above; such instruments are higher risk and traded repeatedly over time; and are measured at fair value through profit or loss.

Financial assets other than trade receivables are written down for impairment on the basis of a general model which estimates expected credit losses over the following 12 months, or over the residual life of the asset in the event of a substantial increase in its credit risk.

The expected credit loss ("**ECL**") is given by: (i) the present value at the reporting date of the financial asset, (ii) the probability that the counterparty does not meet its payment obligation (probability of default, "**PD**"), (iii) the estimate, in percentage terms, of the amount of credit that it will not be able to recover in the event of a default (loss given default, "**LGD**").

To determine the PD and LGD, reference is made to the Bloomberg credit risk model.

For the management of trade receivables, TIM Management has identified different business models based on the specific nature of the receivables, the type of counterparty and collection times, in order to optimize the management of working capital through the constant monitoring of the payment performance of customers, the steering of credit collection policies, and the management of programs for the disposal and factoring of receivables, in line with financial planning needs.

The business models adopted by the TIM Group for managing trade receivables are:

- *Hold to Collect*: receivables usually held to maturity, such as trade receivables due from large customers and the OLOs for the Domestic Business Unit, and all receivables for the Brazil Business Unit; these instruments fall within IFRS 9 category "Assets measured at amortized cost";
- *Hold to Collect and Sell*: receivables usually traded massively and on a recurring basis, such as, for the Domestic Business Unit, receivables due from active consumer, small and medium business customers held for sale; these instruments fall under IFRS 9 category "Financial assets measured at fair value through other comprehensive income". As required by IFRS 9, the relevant Reserve is reversed to the separate consolidated income statements when the financial asset is disposed of or impaired.

Impairment of trade receivables and contract assets is carried out through the simplified approach allowed by the standard. This approach involves estimating the expected loss over the life of the receivable at the time of initial recognition and on subsequent measurements. For each customer segment, the estimate is principally made by calculating the average expected uncollectibility, based on historical and statistical indicators, possibly adjusted using forward-looking elements. For some categories of receivables characterized by specific risk elements, specific measurements are made on individual credit positions.

In general, the methodology to recognize the expected loss differs based on the offering content, the customer cluster and payment terms.

More specifically, in the case of receivables arising from traditional services offered to consumers and businesses, the expected loss is estimated based on the trend of outstanding receivables with respect to turnover, using the values recorded for turnover generations that have completed the operating cycle as a reference, as well as parameters for measuring the most recent performance, suitable for identifying deviations from the historical trend.

As regards receivables arising from offers where products or contribution fees are paid in installments, the assessment of credit default risk for ongoing payment-by-installment plans considers the trend of the customer drop out rate and the average of sums received from such customers.

For clusters with relational-based credit management (such as major TOP customers, the public administration sector, wholesale customers, sales network dealers), information that can identify specific individual counterparty risk is used in the assessment.

At the transition date (January 1, 2018), TIM has chosen to continue to report gains and losses from "other investments (other than those in subsidiaries, associates and joint ventures)", classified under IAS 39 as "available-for-sale financial assets" and measured at fair value, through other comprehensive income, also under IFRS 9. As of January 1, 2018, the aforementioned "other investments" are therefore measured at fair value

through other comprehensive income (FVTOCI). Only dividends from "other investments" are recognized in the income statement, while all other gains and losses are recognized through other comprehensive income without reclassification to the separate income statement when the financial asset is disposed of or impaired as provided by IAS 39.

The changes in the classification of financial assets had no material impact on the measurement of such assets for the TIM Group.

The comprehensive net impact (including tax effects) of the adoption of IFRS 9 on consolidated equity at the transition date of January 1, 2018 was mainly due to the recognition of higher write-downs for expected losses on trade receivables, connected with the introduction of an expected credit loss model, replacing the incurred loss model required by IAS 39.

IFRS 15 (Revenues from contracts with customers)

IFRS 15 replaces the standards that formerly governed revenue recognition, namely IAS 18 (*Revenue*), IAS 11 (*Construction contracts*) and the related interpretations on revenue recognition (IFRIC 13 *Customer loyalty programmes*, IFRIC 15 *Agreements for the construction of real estate*, IFRIC 18 *Transfers of assets from customers* and SIC 31 *Revenue—Barter transactions involving advertising services*).

The TIM Group has applied the retrospective method with the recognition of the cumulative effect of the first-time application of the standard as an adjustment to the opening balance of equity for the period when the standard is adopted, without restating prior periods, according to IFRS 15, paragraph C3 b).

The adoption of IFRS 15 affected the recognition of revenues from fixed-line and mobile offers and the recognition of contract costs. The main differences for the TIM Group with respect to the previous accounting standards applied (IFRS 15 vs. IAS 18, IAS 11 and relative Interpretations) concern:

- **bundle offers** (bundled good and services): the allocation of contract discounts to performance obligations under IFRS 15 determines an earlier recognition of revenues, resulting in the recognition of a contract asset and, in some cases, the deferral of revenues, entailing the recognition of a contract liability;
- **activation/installation revenues**: under previous accounting policies, these were deferred over the expected duration of the customer relationship. IFRS 15 requires that such revenues—given that they are not allocated to separate performance obligations—are allocated to other performance obligations (usually services) contained in the contract;
- **contract costs** (incremental costs of obtaining a contract and costs to fulfill a contract): under previous accounting policies, these costs were capitalized or deferred and recognized in the income statement on the basis of the expected duration of the contract and the type of customer. The approach is substantially confirmed under IFRS 15, with the exception of the reclassification of certain contract costs and the change in the types of costs considered, in some cases.

The comprehensive net impact (including tax effects) of the adoption of IFRS 15 on consolidated equity at January 1, 2018 (transition date) was not material and mainly connected with the combined effects of:

- the change in the types of contract costs that are deferred;
- the new approach to recognizing activation/installation revenues and the recognition of contract assets connected with the earlier recognition of revenues from bundle offers.

IMPACTS OF THE ADOPTION OF IFRS 9 AND IFRS 15

Impacts on the consolidated statements of financial position at 1/1/2018 (transition date)

The impacts of the transition on the main line items of the consolidated statements of financial position are shown below.

	As of December 31, 2017 Historical	IFRS 9 impact(*)	IFRS 15 impact(*)	As of January 1, 2018 Restated
		(millions of euros)		
Assets				
Non-current assets				
Intangible assets				
Intangible assets with a finite useful life	7,192		(110)	7,082
Other non-current assets				
Non-current financial assets	1,768			1,768
Miscellaneous receivables and other non-current assets	2,422		(269)	2,153
Deferred tax assets	993	27		1,020
Current assets				
Trade and miscellaneous receivables and other current assets	4,959	(147)	42	4,854
Current financial assets	5,005			5,005
Total Assets	68,783	(120)	(337)	68,326
Equity and Liabilities				
Equity				
Equity attributable to owners of the Parent	21,557	(100)	17	21,474
Non-controlling interests	2,226	(7)	2	2,221
Total Equity	**23,783**	**(107)**	**19**	**23,695**
Non-current liabilities				
Miscellaneous payables and other non-current liabilities	1,678		(251)	1,427
Deferred tax liabilities	265	(11)	8	262
Current liabilities				
Trade and miscellaneous payables and other current liabilities	7,520		(113)	7,407
Current income tax payables	112	(2)		110
Total Equity and liabilities	**68,783**	**(120)**	**(337)**	**68,326**

(*) For further details, see the specific notes to the Consolidated Financial Statements at December 31, 2018.

Following the adoption of IFRS 9, the different classification of financial assets had no substantial impact for the TIM Group on the measurement of those assets, while the introduction of the expected credit loss model replacing the incurred loss model required by IAS 39, resulted in a reduction of 107 million euros in consolidated equity at the transition date of January 1, 2018.

The comprehensive net impact (including tax effects) of the adoption of IFRS 15 on consolidated equity at January 1, 2018 (transition date) was a positive 19 million euros and mainly connected with the combined effects of:

- the change in the types of contract costs that are deferred;
- the new approach to recognizing activation/installation revenues and the recognition of contract assets connected with the earlier recognition of revenues from bundle offers.

Impact of new accounting standards (IFRS 9 and IFRS 15) on the main line items of the separate consolidated income statements and consolidated statements of financial position for the year 2018

To enable the year-on-year comparison of the economic and financial performance for the year 2018, "comparable" financial position figures and "comparable" income statement figures, prepared in accordance with the previous accounting standards applied (IAS 39, IAS 18, IAS 11, and relative Interpretations) are provided below.

The breakdown of the impact of the new accounting standards on key consolidated income statement figures for year 2018 is shown below.

		Year ended December		New accounting standards impact
		2018	2018 comparable	
		(a)	(b)	(c=a-b)
		(millions of euros)		
Revenues	(1)	18,940	19,109	(169)
Operating expenses	(2)	(11,878)	(11,737)	(141)
Depreciation and amortization	(3)	(4,255)	(4,399)	144
Operating profit (loss) (EBIT)		**561**	**727**	**(166)**
Other income (expenses) from investments	(4)	11	10	1
Finance income (expenses)	(5)	(1,348)	(1,341)	(7)
Profit (loss) before tax from continuing operations		**(777)**	**(605)**	**(172)**
Income tax expense	(6)	(375)	(433)	58
Profit (loss) for the year		**(1,152)**	**(1,038)**	**(114)**
Attributable to:				
Owners of the Parent		**(1,411)**	**(1,298)**	**(113)**
Non-controlling interests		259	260	(1)

(1) The change in **Revenues** was attributable to the different accounting of bundle offers and activation/installation revenues and to the discounting of revenues from sales using the deferred payment method, using a discount rate reflecting the creditworthiness of customers.

(2) The change in **Operating expenses** was mainly due to the deferral of certain subscriber acquisition costs and contract costs that were previously expensed and to the reclassification of some contract costs from intangible assets to other non-current and current assets (cost deferral), as well as higher provisions for expected losses on trade receivables, resulting from the introduction of an expected credit loss model (replacing the incurred loss model).

(3) The change in **Depreciation and amortization** was due to the reclassification of certain contract costs from intangible assets to other non-current and current assets (cost deferral).

(4) The change in **Other income (expenses) from investments** was due to the different accounting of the write-downs of the Other investments, which with the new standard are recognized under other components of the statements of comprehensive income.

(5) The change in **Finance income (expenses)** was due to higher provisions for expected losses on other financial assets, due to the introduction of an expected credit loss model (replacing the incurred loss model).

(6) The change in **Income tax expense** shows the income tax effect of the changes illustrated above.

The impact of the new accounting standards (IFRS 9 and IFRS 15) on the basic Earnings per Ordinary and Savings Share for the year 2018 is equal to -0.01 euros; instead, the impact is zero on diluted earnings per ordinary and savings share.

The breakdown of the impact of the new accounting standards on the main consolidated statements of financial position figures at December 31, 2018 is shown below.

	As of December 31,		New accounting standards impact (*)
	2018	2018 comparable	
	(a)	(b)	(c=a-b)
	(millions of euros)		
Assets			
Non-current assets			
Intangible assets	35,658	35,771	(113)
Tangible assets	16,146	16,146	—
Other non-current assets	5,086	5,368	(282)
Non-current assets	**56,890**	**57,285**	**(395)**
Current assets	**8,729**	**8,794**	**(65)**
Total Assets	**65,619**	**66,079**	**(460)**
Equity and Liabilities			
Equity			
Equity attributable to owners of the Parent	19,528	19,716	(188)
Non-controlling interests	2,219	2,225	(6)
Total Equity	**21,747**	**21,941**	**(194)**
Non-current liabilities	30,991	31,276	(285)
Current liabilities	12,881	12,862	19
Total Liabilities	**43,872**	**44,138**	**(266)**
Total Equity and liabilities	**65,619**	**66,079**	**(460)**

(*) For more details, see the information provided on impacts at the transition date.

NEW STANDARDS AND INTERPRETATIONS ISSUED BY IASB BUT NOT YET IN FORCE

At the date of preparation of these financial statements, the following new standards and interpretations, which have not yet entered into force, had been issued by the IASB:

IASB/IFRIC documents	Mandatory application starting from
IFRS 16 (*Leases*)	1/1/2019
Amendments to IFRS 9: Prepayment Features with Negative Compensation	1/1/2019
IFRIC 23 – Uncertainty over income tax treatments	1/1/2019
Amendments to IAS 28: Long-term interests in Investments in associates and joint ventures	1/1/2019
Improvements to the IFRS (2015–2017 cycle)	1/1/2019
Amendments to IAS 19: plan amendment, curtailment or settlement	1/1/2019
Amendments to References to the Conceptual Framework in IFRS Standards	1/1/2020
IFRS 17: Insurance contracts	1/1/2021
Amendments to IFRS 3 Business combinations	1/1/2020
Amendments to IAS 1 and IAS 8: definition of materiality	1/1/2020

The potential impacts on the consolidated financial statements from application of these standards and interpretations are currently being assessed.

IFRS 16 (Leases)

IFRS 16 replaces IAS 17 (*Leases*) and relative interpretations (IFRIC 4 *Determining whether an Arrangement Contains a Lease*; SIC 15 *Operating Leases—Incentives*; SIC 27 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*). IFRS 16 applies retrospectively commencing as of January 1, 2019.

According to IFRS 16, lease agreements (that are not service contracts) are accounted by the lessee through the **recognition of a financial liability** in the statements of financial position, represented by the present value of the future lease payments, against the **recognition under assets of the "right of use asset"**.

Contracts classified by the lessee as financial leases according to IAS 17, will not be subject to any change with respect to the current accounting presentation, since they will continue to be classified as finance leases in full accordance with the past.

Upon first application of IFRS 16, for the contracts already classified as operating leases according to IAS 17, the TIM Group intends to apply the retrospective method recognizing a financial liability for lease agreements and the corresponding "right of use asset", measured on the basis of the remaining lease payments at the transition date, according to IFRS 16, paragraph C5 b).

Those agreements within the TIM Group that fall within the scope of application of IFRS 16 mainly refer to:

- land and buildings for office and industrial use,
- infrastructure sites for the mobile telephony network, and
- network infrastructure (when not services).

With reference to the options and exemptions provided for by IFRS 16, the TIM Group will adopt the following choices:

- IFRS 16 is not usually applied to intangible assets or to short-term (i.e. less than 12 months) and to contracts with low unit value;
- the "right of use asset" and the financial liabilities relating to lease agreements are classified in specific line items in the statements of financial position;
- any service contract component included in the lease payments is generally excluded from the IFRS 16 scope;
- contracts with similar characteristics are measured using a single discount rate;
- lease contracts already classified as finance lease under IAS 17 retain the previously recognized values.

The main impacts on the Group's consolidated financial statements, which are still being assessed and refined, may be summarized as follows:

- **Statements of financial position**: higher non-current assets due to the recognition of "right of use asset" with corresponding higher financial liabilities; as a result, **a lease liability in the range of 3.4 – 3.9 billion euros is expected to be recognized upon transition**.
- **Separate income statements**: a **positive impact on Operating Profit**, due to the different nature, description, and classification of expenses (the amortization of "user rights for the asset" and "financial expense for interest" instead of "Lease and rental costs—payments for operating leases", as per IAS 17).

  Furthermore, the combination of the straight-line depreciation of the "right of use asset" and the application of the effective interest rate method for lease liabilities will result, compared to IAS 17, in higher income statement expenses in the first few years of the contracts and decreasing expenses in the last years of the contracts
- **Statements of Cash Flows**: lease payments for the principal of the debt repayment will be reclassified from "Cash flows from operating activities" to "Cash flows from financing activities".

The process of implementing the new accounting standard entails significant updates and modifications on the IT systems, modification and updating of the control and compliance models and of their processes. The impacts are based on the results of the analyses at the date these financial statements are prepared, and might change since implementation is still in progress.

The impacts during transition are not indicative of future developments since the choices of allocating capital might change with resulting economic and financial repercussions on recognition in the financial statements.

NOTE 3—SCOPE OF CONSOLIDATION

Investments in consolidated subsidiaries

Composition of the Group

TIM holds a majority of the voting rights in all the subsidiaries included in the scope of consolidation.

A complete list of consolidated subsidiaries is provided in the Note "List of companies of the TIM Group".

Scope of consolidation

The changes in the scope of consolidation at December 31, 2018 compared to December 31, 2017 are listed below.

These changes did not have any significant impacts on the Consolidated Financial Statements of the TIM Group at December 31, 2018.

Subsidiaries exiting/merged into the scope of consolidation:

Company		Business Unit	Month
Exit:			
OLIVETTI ESPAÑA S.A. (in liquidation)	Liquidated	Other Operations	December 2018
Merger:			
TI SPARKLE MED S.p.A.	Merged into TI Sparkle S.p.A.	Domestic	April 2018
TIM CELULAR S.A.	Merged into TIM S.A.	Brazil	October 2018

The breakdown by number of subsidiaries and associates of the TIM Group is as follows:

	As of December 31, 2018		
Companies	Italy	Outside Italy	Total
subsidiaries consolidated line-by-line	21	42	63
joint ventures accounted for using the equity method	1	—	1
associates accounted for using the equity method	16	—	16
Total companies	**38**	**42**	**80**

	As of December 31, 2017		
Companies	Italy	Outside Italy	Total
subsidiaries consolidated line-by-line	22	44	66
joint ventures accounted for using the equity method	1	—	1
associates accounted for using the equity method	19	—	19
Total companies	**42**	**44**	**86**

Further details are provided in the Note "List of companies of the TIM Group".

Subsidiaries with significant non-controlling interests

At December 31, 2018, the TIM Group held investments in subsidiaries, with significant non-controlling interests, in relation to the TIM Brasil group.

The figures provided below, stated before the netting and elimination of intragroup accounts, have been prepared in accordance with IFRS and reflect adjustments made at the acquisition date to align the assets and liabilities acquired to their fair value.

TIM Brasil group—Brazil Business Unit

Non-controlling interests accounted at December 31, 2018 for 33.4% of the capital of Tim Participações, which in turn holds 100% of the capital of the operating company Tim S.A., coinciding with their corresponding voting rights.

Statement of Financial Position Data—TIM Brasil group

	Year ended December 31,	
	2018	2017
	(millions of euros)	
Non-current assets	6,257	6,819
Current assets	1,387	1,929
Total Assets	**7,644**	**8,748**
Non-current liabilities	959	1,703
Current liabilities	1,678	1,852
Total Liabilities	**2,637**	**3,555**
Equity	**5,007**	**5,193**
of which, Non-controlling interests	*1,518*	*1,556*

Income Statement Data—TIM Brasil group

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Revenues	3,943	4,502	4,047
Profit (loss) for the year	**586**	**340**	**194**
of which, Non-controlling interests	*200*	*114*	*65*

Financial Data—TIM Brasil group

In 2018, aggregate cash flows generated a negative amount of 512 million euros, essentially due to a negative exchange rate effect of 67 million euros, without which cash flow would have generated a negative 445 million euros.

In 2017, aggregate cash flows generated a negative amount of 744 million euros, essentially due to a negative exchange rate effect of 146 million euros, without which cash flow would have generated a negative 598 million euros.

Lastly, again with reference to the Tim Brasil group and in line with the information given in the Report on Operations—Main risks and uncertainties Section, the main risk factors that could, even significantly, restrict the operations of the Tim Brasil group are listed below:

- strategic risks (risks related to macroeconomic and political factors, as well as risks associated with foreign exchange restrictions and competition);
- operational risks (risks related to business continuity and development of the fixed and mobile networks, as well as risks associated with litigation and disputes);
- financial risks;
- Regulatory and Compliance risks.

NOTE 4—BUSINESS COMBINATIONS

YEAR 2018

In 2018, there were no material business combination transactions, as defined in IFRS 3.

YEAR 2017

In 2017, there were no material business combination transactions, as defined in IFRS 3.

YEAR 2016

In 2016, there were no material business combination transactions, as defined in IFRS 3.

NOTE 5—GOODWILL

Goodwill shows the following breakdown and changes during 2017 and 2018:

	As of December 31, 2016	Reclassification	Increase	Decrease	Impairments	Exchange differences	As of December 31, 2017
	(millions of euros)						
Domestic	28,489						28,489
Core Domestic	*28,077*						*28,077*
International Wholesale	*412*						*412*
Brazil	1,123					(150)	973
Other operations	—						—
Total	**29,612**	**—**	**—**	**—**	**—**	**(150)**	**29,462**

	As of December 31, 2017	Reclassification	Increase	Decrease	Impairments	Exchange differences	As of December 31, 2018
	(millions of euros)						
Domestic	28,489				(2,590)		25,899
Core Domestic	*28,077*				*(2,450)*		*25,627*
International Wholesale	*412*				*(140)*		*272*
Brazil	973					(103)	870
Other operations	—						—
Total	**29,462**	**—**	**—**	**—**	**(2,590)**	**(103)**	**26,769**

In accordance with IAS 36, goodwill is not subject to amortization, but is tested for impairment annually when preparing the company's consolidated financial statements.

In 2018 Goodwill fell by 2,693 million euros, from 29,462 million euros at the end of 2017 to 26,769 million euros at December 31, 2018, due to the 2,590 million-euro impairment loss recognized during the year related to the Domestic Business Unit, as well as the goodwill allocated for the exchange difference of the Brazil Cash Generating Unit.

The Domestic Business Unit is made up of the Core Domestic CGU and the International Wholesale CGU. In relation to the Core Domestic CGU, as of September 30, 2018, events and circumstances of an exogenous and endogenous nature had occurred which led the company to carry out impairment testing on the CGU, this led to an impairment loss recognized for an amount of 2,000 million euros.

The impairment testing carried out during the preparation of the 2018 financial statements led to an additional impairment loss of 450 million euros of the goodwill attributed to the Core Domestic CGU—as well as an impairment loss of 140 million euros of goodwill attributed to the International Wholesale CGU.

The impairment testing did not reveal any impairment in relation to the Brazil CGU.

The gross carrying amounts of goodwill and the relative accumulated impairment losses from January 1, 2004 (date of allocation to the Cash Generating Units—CGUs) to December 31, 2018 and 2017 can be summarized as follows:

	As of December 31, 2018			As of December 31, 2017		
	Gross carrying amount	Accumulated impairment losses	Net carrying amount	Gross carrying amount	Accumulated impairment losses	Net carrying amount
			(millions of euros)			
Domestic	42,457	(16,558)	25,899	42,457	(13,968)	28,489
Core Domestic	*42,045*	*(16,418)*	*25,627*	*42,045*	*(13,968)*	*28,077*
International Wholesale	*412*	*(140)*	*272*	*412*	—	*412*
Brazil	1,077	(207)	870	1,204	(231)	973
Other operations	—	—	—	—	—	—
Total	**43,534**	**(16,765)**	**26,769**	**43,661**	**(14,199)**	**29,462**

The figures for the Brazil CGU are stated in euros, converted at the spot exchange rate at the closing date of the financial statements; the carrying amount of goodwill for the CGU corresponds to 3,854 million reais.

The impairment test was conducted at two levels; at the first level, the recoverable amount was estimated for the assets assigned to the individual cash-generating units to which goodwill is allocated; at the second level, the assets of the Group as a whole were considered.

With regard to the first level test, goodwill was allocated to the following cash-generating units (or groups of units):

Segment	Cash Generating Units (or groups of units)
Domestic	Core Domestic
	International Wholesale
Brazil	Brazil

At December 31, 2018 the "recoverable amount" of the CGUs was equal to the greater of the "fair value less disposal costs" and the "value in use".

The value used to determine the recoverable value were the value in use for Core Domestic, fair value for International Wholesale and Brazil. In particular, for Brazil, the fair value was determined on the basis of the market capitalization at the end of the period; for International Wholesale, the fair value was determined on the basis of direct market multiples relating to a sample of comparable companies, taking into account the average values of the Enterprise Value/EBITDA ratio, applied to the forecast 2019 EBITDA of the CGU (level 3 fair value in the reference standard's hierarchy, corresponding to "prices calculated using inputs that are not based on observable market data").

The values used were expressed in the local currency, and hence in EUR for the Core Domestic and International Wholesale CGUs and BRL for the Brazil CGU. For the Brazil CGU, the recoverable amount of the assets was denominated in the functional currency and subsequently translated at the spot exchange rate at the reporting date.

For the Core Domestic CGU value in use estimates were made, in accordance with IAS 36 and with valuation principles and best practices, based on the expected cash flows in different scenarios. The various expected cash flows were then summarized into an average normal cash flow, determined with the aid of Experts (expert appraisers and industry experts) and based on the data from the 2019-2021 Industrial Plan approved by the Board of Directors. The expected average cash flows were measured for the three years of the 2019-2021 Industrial Plan, plus an additional two years on the basis of extrapolated data, for which future cash flows were explicitly forecast for a period of five years (2019-2023). The extrapolation of data for 2022-2023 enabled market and competition trends that will become manifest beyond the time horizon of the Industrial Plan to be captured.

For the estimate of the terminal value, the sustainable long-term cash flow was assumed to be the extrapolation of the estimated cash flow at 2023, adjusted as necessary to take into consideration a suitable level of long-term capital expenditure. Furthermore, with specific reference to the valuation of the incremental share of the value deriving from 5G license use and therefore from the development of new and innovative business areas, an evaluation model has been adopted that takes into account the net incremental flows for a period of defined time which only concerns the duration of the license. This approach is consistent with the need in the value used to capture on one hand the outgoing flows deriving from the payment of the license (2019-2022) and the supporting capex, and on the other to capture the positive net flows from the incremental business component of the license acquisition that will develop over a broad period of time and over the 5 years of explicit forecast.

The Industrial Plan (2019-2021) incorporates some valuations of potential risk factors and the actions adopted to mitigate them. In defining the average normal flows for the purposes of impairment testing, management, with the help of the experts, identified additional risk factors, modifying the amount and/or distribution over time of future cash flows, giving a greater weighting to external data available.

The cost of capital used to discount the future cash flows for estimating the value in use of the Core Domestic:

- was estimated using the Capital Asset Pricing Model (CAPM), which is one of the generally accepted application criteria referred to in IAS 36;
- reflects the current market estimates of the time value of money and the specific risks of the groups of assets; it includes appropriate yield premiums for country risk and the risk associated with the depreciation of the currency of denomination of the cash flows;
- was calculated using comparative market parameters to estimate the "Beta coefficient" and the weighting coefficient of the equity and debt capital components.

Details are provided below for the Core domestic CGU:

- of the weighted average cost of capital (WACC rate) used to discount the future cash flows, and the equivalent rate before tax;
- of the growth rate used to estimate the residual value after the explicit forecast period (the G-Rate), expressed in nominal terms and related to the cash flows in its functional currency;
- of the implicit capitalization rates resulting from the difference between the cost of capital, after tax, and the G-Rate.

Principal parameters for the estimates of value in use

	Core Domestic
	%
WACC	6.60
WACC before tax	8.91
Growth rate beyond the explicit period (g)	0.50
Capitalization rate net of tax (WACC -g)	6.10
Capitalization rate before taxes (WACC -g)	8.41
Capex/Revenues, % perpetual	20.15

The growth rate of the terminal value "g" of the Core Domestic CGU was estimated taking into account the expected outlook during the explicit forecast period and are consistent with the range of growth rates applied by analysts who monitor TIM shares.

In estimating the level of capital expenditure required to sustain the perpetual generation of cash flows after the explicit forecast period, according to the phase of capital expenditure, competitive positioning and the technological infrastructure operated were taken into account.

In addition to average normal cash flows, to take into account the market operator's perspective, sensitivity analyses were conducted on the risk factors identified with the experts to determine the value in use of the Core Domestic CGU.

The difference between the recoverable amounts and the net carrying amounts of the CGUs considered totaled:

	Core Domestic	International Wholesale	Brazil
	(millions of euros)		
Difference between recoverable amounts and net carrying amounts	**(2,450)**	**(140)**	**1,246**

Therefore, in the light of the factors above, the impairment loss of the goodwill allocated to the Core Domestic Cash Generating Unit amounted to 2,450 million euros and the impairment loss of the goodwill allocated to the International Wholesale Cash Generating Unit is equal 140 million euros.

The Brazil Cash Generating Unit on the other hand showed a positive difference of 1.2 billion euros. As the recoverable amount, determined on the basis of fair value, was higher than the carrying amounts, the value in use was not calculated for the Brazil CGU.

In relation to the Brazil CGU, the sensitivity analyzes showed that the change necessary to make the recoverable value equal to the carrying amount was equal to -25% of the share value.

With regard to value testing at overall Group level, the sum of the recoverable amounts of all the CGUs was compared against the carrying amount of the net operating assets in the consolidated financial statements. No impairment losses were recorded at this additional level of impairment testing.

NOTE 6—INTANGIBLE ASSETS WITH A FINITE USEFUL LIFE

Intangible assets with a finite useful life increased by 1,697 million euros compared to December 31, 2017. The breakdown and movements are as follows:

	As of December 31, 2016	Addition	Amortization	Impairment losses / Reversals	Disposals	Exchange Differences	Capitalized borrowing costs	Other changes	As of December 31, 2017
	(millions of euros)								
Industrial patents and intellectual property rights	2,458	771	(1,263)			(147)		374	2,193
Concessions, licenses, trademarks and similar rights	2,854	140	(396)			(96)		248	2,750
Other intangible assets	109	157	(134)			(5)		7	134
Work in progress and advance payments	1,530	1,224		(30)		(143)	73	(539)	2,115
Total	**6,951**	**2,292**	**(1,793)**	**(30)**	**—**	**(391)**	**73**	**90**	**7,192**

	As of December 31, 2017	IFRS 15 Adoption	Addition	Amortization	Impairment losses / Reversals	Disposals	Exchange Differences	Capitalized borrowing costs	Other changes	As of December 31, 2018
	(millions of euros)									
Industrial patents and intellectual property rights	2,193		703	(1,171)			(98)		468	2,095
Concessions, licenses, trademarks and similar rights	2,750		103	(422)			(64)		894	3,261
Other intangible assets	134	(110)	11	(6)			(1)		5	33
Work in progress and advance payments	2,115		2,830		4	(1)	(88)	37	(1,397)	3,500
Total	**7,192**	**(110)**	**3,647**	**(1,599)**	**4**	**(1)**	**(251)**	**37**	**(30)**	**8,889**

Additions in 2018, equal to 3,647 million euros (increased by 1,355 million euros compared to 2017) and particularly were affected by the impacts caused by the acquisitions of user rights for mobile telephone frequencies in Italy (2,399 million euros), recognized in Works in Progress.

Additions in 2018 also included 248 million euros of internally generated assets (272 million euros in 2017); Further details are provided in the Note ''Internally generated assets''.

Industrial patents and intellectual property rights at December 31, 2018 consisted mainly of application software purchased outright and user licenses acquired, amortized over a period between 2 and 5 years. They mainly related to TIM S.p.A. (1,256 million euros) and to the Brazil Business Unit (794 million euros).

Concessions, licenses, trademarks and similar rights at December 31, 2018 mainly related to:

- the remaining cost of telephone licenses and similar rights (2,040 million euros for TIM S.p.A., 615 million euros for the Brazil Business Unit); they increased by 502 million euros, mainly following the reclassification of the Parent to the extension of the user rights to the 900 and 1800 MHz band (GSM license) acquired in 2017 with starting date July 1, 2018 and the reclassification from the Brazil Business Unit of the right to use the 700 MHz frequencies that came into operation;
- Indefeasible Rights of Use—IRU (412 million euros), mainly relating to companies of the Telecom Italia Sparkle group—International Wholesale (270 million euros), the Parent (110 million euros) and the Brazil Business Unit (32 million euros);
- TV frequencies of the company Persidera in the Core Domestic segment (104 million euros). The user licenses for the frequencies used for digital terrestrial transmission will expire in 2032.

The residual amount of telephone licenses and similar rights (2,655 million euros) and their useful lives are detailed below:

Type of license	Residual amount at December 31, 2018 (millions of euros)	Useful life (years)	Maturity date	Amortization expense for 2018 (millions of euros)
TIM S.p.A.:				
UMTS	403	18	12/31/2021	134
UMTS 2100 MHz	22	12	12/31/2021	7
WiMax	4	15	05/31/2023	1
LTE 1800 MHz	94	18	12/31/2029	9
LTE 800 MHz	661	17	12/31/2029	60
LTE 2600 MHz	73	17	12/31/2029	7
1452-1492 MHz band	181	14	12/31/2029	16
GSM (extension)	—	3	06/30/2018	17
900 and 1800 MHz band	602	12	12/31/2029	27
Tim Brasil group:				
GSM and 3G (UMTS)	129	15	From 2023 to 2031	41
4G (LTE—700 MHz)	486	15	2030	36

Other intangible assets fell mainly due to the introduction of IFRS 15, under which mobile customer acquisition costs (Subscriber Acquisition Costs—SACs), relating to contracts with minimum term clauses, are no longer capitalized and amortized. Instead they are reclassified as deferred contract costs and then subsequently recognized in the income statement over the term of the contract in the item ''Acquisition of goods and services'', at December 31, 2017 SACs amounted to 110 million euros.

The figure for other intangible assets at December 31, 2018 mainly consisted of surface rights acquired by INWIT.

Work in progress and advance payments mainly included:

- the investment by the Parent in the acquisition of user rights to frequencies in the 694-790 MHz, 3600-3800 MHz and 26.5-27.5 GHz bands, which will be reserved for 5G mobile telecommunications services for the total amount of 2,399 million euros (net of the 8 million-euro discount applied to the award proportionate to the population in the areas affected by the testing), due to the participation of TIM S.p.A. in the auction for their award in 2018 by the Ministry of Economic Development. The user rights were formally awarded on October 9, 2018. The use of the rights to 3600–3800 MHz and 26.5–27.5 GHz frequencies started in January 2019; whereas the use of the rights to 694–790 MHz frequencies will start in July 2022. The awarded rights will be paid in six annual installments, the first of which was paid at the end of October 2018 for the amount of 477 million euros;

- the amount of the user rights for the 700 MHz frequencies, equal to 461 million euros, acquired in 2014 by the Tim Brasil group for a total of 2.9 billion reais (equal to around 1 billion euros), but not yet in operation. In 2018, part of the user rights, amounting to 261 million euros, came into operation and was consequently reclassified under the item "Concessions, licenses, trademarks and similar rights". The finance expenses directly attributable to the purchase of these rights have been capitalized since 2014. In 2018, the capitalized finance expenses totaled 37 million euros, at an annual interest rate of 8.37%; expenses capitalized were deducted directly in the income statement from "Finance expenses".

In 2018, the Parent also carried out an adjustment of 4 million euros for Construction contracts previously subject to impairment.

Work in progress and advance payments at December 31, 2017 included the payment of 630 million euros for the extension of the user rights to the 900 and 1800 MHz band from July 1, 2018 until December 31, 2029. As a result, in 2018 the value of the license extension was reclassified under the line item "Concessions, licenses, trademarks and similar rights".

Depreciation and impairment losses have been recorded in the income statement as components of Operating Profit.

The gross carrying amount, accumulated impairment losses and accumulated amortization at December 31, 2018 and 2017 can be summarized as follows:

	As of December 31, 2017			
	Gross carrying amount	Accumulated impairment losses	Accumulated amortization	Net carrying amount
	(millions of euros)			
Industrial patents and intellectual property rights	12,266	(7)	(10,066)	2,193
Concessions, licenses, trademarks and similar rights	7,044	(273)	(4,021)	2,750
Other intangible assets	522		(388)	134
Work in progress and advance payments	2,145	(30)		2,115
Total intangible assets with a finite useful life	**21,977**	**(310)**	**(14,475)**	**7,192**

	As of December 31, 2018			
	Gross carrying amount	Accumulated impairment losses	Accumulated amortization	Net carrying amount
	(millions of euros)			
Industrial patents and intellectual property rights	10,832		(8,737)	2,095
Concessions, licenses, trademarks and similar rights	7,839	(277)	(4,301)	3,261
Other intangible assets	241		(208)	33
Work in progress and advance payments	3,526	(26)		3,500
Total intangible assets with a finite useful life	**22,438**	**(303)**	**(13,246)**	**8,889**

Impairment losses on "Concessions, licenses, trademarks and similar rights", mainly relating to reporting periods prior to 2004, refer to the Indefeasible Rights of Use (IRU) for the transmission capacity and cables for international connections acquired by the Telecom Italia Sparkle group.

With regard to the gross carrying amounts of intangible assets with a finite life, in 2018 disposals were made by the Parent for a total amount of 2,195 million euros, mainly in relation to obsolete releases of software systems of the Parent; consequently, where present, the accumulated impairment losses and the accumulated depreciation related to them were also canceled.

NOTE 7—TANGIBLE ASSETS (OWNED AND UNDER FINANCE LEASES)

Property, plant and equipment owned

Property, plant and equipment owned increased by 35 million euros compared to December 31, 2017. The breakdown and movements are as follows:

	As of December 31, 2016	Addition	Depreciation	Impairment losses / Reversals	Disposals	Exchange Differences	Other changes	As of December 31, 2017
				(millions of euros)				
Land	203	6				(2)	6	213
Buildings (civil and industrial)	509	10	(39)			(3)	11	488
Plant and equipment	11,709	2,601	(2,286)	(8)	(8)	(332)	373	12,049
Manufacturing and distribution equipment	38	12	(16)				2	36
Other	391	88	(159)		(2)	(18)	76	376
Construction in progress and advance payments	1,097	541		1	(1)	(41)	(543)	1,054
Total	**13,947**	**3,258**	**(2,500)**	**(7)**	**(11)**	**(396)**	**(75)**	**14,216**

	As of December 31, 2017	Addition	Depreciation	Impairment losses / Reversals	Disposals	Exchange Differences	Other changes	As of December 31, 2018
				(millions of euros)				
Land	213	6				(1)	32	250
Buildings (civil and industrial)	488	79	(36)			(2)	59	588
Plant and equipment	12,049	2,013	(2,229)		(7)	(217)	487	12,096
Manufacturing and distribution equipment	36	8	(14)				1	31
Other	376	94	(162)		(2)	(13)	65	358
Construction in progress and advance payments	1,054	488			(4)	(21)	(589)	928
Total	**14,216**	**2,688**	**(2,441)**	**—**	**(13)**	**(254)**	**55**	**14,251**

Land comprises both built-up land and available land and is not subject to depreciation. The figure for December 31, 2018 refers primarily to TIM S.p.A. (209 million euros).

Buildings (civil and industrial) almost exclusively includes buildings for industrial use hosting telephone exchanges, or for office use and light constructions. The figure for December 31, 2018 referred primarily to TIM S.p.A. (555 million euros). It is noted that in the course of 2018, as part of the project to rationalize industrial and office space in progress, during the year the Parent signed an agreement with a primary real estate firm that entailed the acquisition of owned property previously leased and the release of other properties no longer considered strategic; the transaction entailed a 69 million-euro net investment for a financial disbursement of 158 million euros and the reclassification of the residual value of assets owned in leased property and of the improvements introduced to owned buildings.

Plant and equipment includes the technological infrastructure used for the functioning of voice and data telephone traffic. The figure at December 31, 2018 was mainly attributable to TIM S.p.A. (9,162 million euros) and to companies of the Brazil Business Unit (1,947 million euros).

Manufacturing and distribution equipment consists of instruments and equipment used for the operation and maintenance of plant and equipment and refers mainly to TIM S.p.A..

The item **Other** mainly consists of hardware for the functioning of the Data Center and for work stations, furniture and fixtures and, to a minimal extent, transport vehicles and office machines.

Construction in progress and advance payments refer to the internal and external costs incurred for the acquisition and internal production of tangible assets, which are not yet in use.

Capital expenditures in 2018 decreased by 570 million euros compared to the previous year, driven mainly by a greater selectivity in capex dedicated to network infrastructure, and include 322 million euros of internally

generated assets (354 million euros in 2017); Further details are provided in the Note "Internally generated assets".

Depreciation, impairment losses and reversals have been recorded in the income statement as components of Operating Profit.

Depreciation for the years 2018 and 2017 was calculated on a straight-line basis over the estimated useful lives of the assets according to the following minimum and maximum rates:

Buildings (civil and industrial)	2%-5.55%
Plant and equipment	3%-50%
Manufacturing and distribution equipment	20%
Other	10%-50%

The gross carrying amount, accumulated impairment losses and accumulated depreciation at December 31, 2018 and 2017 can be summarized as follows:

	As of December 31, 2017			
	Gross carrying amount	Accumulated impairment losses	Accumulated depreciation	Net carrying amount
	(millions of euros)			
Land	218	(5)		213
Buildings (civil and industrial)	1,717	—	(1,229)	488
Plant and equipment	68,964	(62)	(56,853)	12,049
Manufacturing and distribution equipment	310	(1)	(273)	36
Other	3,988	(2)	(3,610)	376
Construction in progress and advance payments	1,054	—		1,054
Total	**76,251**	**(70)**	**(61,965)**	**14,216**

	As of December 31, 2018			
	Gross carrying amount	Accumulated impairment losses	Accumulated depreciation	Net carrying amount
	(millions of euros)			
Land	253	(3)		250
Buildings (civil and industrial)	1,862	—	(1,274)	588
Plant and equipment	70,525	(62)	(58,367)	12,096
Manufacturing and distribution equipment	318	(1)	(286)	31
Other	3,885	(2)	(3,525)	358
Construction in progress and advance payments	928	—	—	928
Total	**77,771**	**(68)**	**(63,452)**	**14,251**

Impairment losses on "Plant and equipment", mainly relating to years prior to 2004, refer to the Telecom Italia Sparkle group. With respect to the gross carrying amounts of tangible assets, in 2018 TIM S.p.A. carried out disposals for a total amount of 431 million euros, mainly in relation to fully depreciated assets. Disposals mainly involved plant and equipment for around 288 million euros, consequently, where present, the accumulated impairment losses and the accumulated depreciation related to them were also canceled.

Assets held under finance leases

Assets held under finance lease decreased by 436 million euros compared to December 31, 2017. The breakdown and movements are as follows:

	As of December 31, 2016	Addition	Increases in finance lease contracts	Depreciation	Exchange Differences	Other changes	As of December 31, 2017
	(millions of euros)						
Land	16						16
Buildings (civil and industrial)	1,835	47	2	(130)		14	1,768
Plant and equipment	365	72	14	(21)	(43)	(34)	353
Other	125		52	(29)	(1)	(9)	138
Construction in progress and advance payments	72	32				(48)	56
Total	**2,413**	**151**	**68**	**(180)**	**(44)**	**(77)**	**2,331**

	As of December 31, 2017	Addition	Increases in finance lease contracts	Depreciation	Exchange differences	Other changes	As of December 31, 2018
	(millions of euros)						
Land	16						16
Buildings (civil and industrial)	1,768	32	12	(159)	—	(288)	1,365
Plant and equipment	353	9	6	(18)	(26)	(22)	302
Other	138		52	(38)	(1)	(3)	148
Construction in progress and advance payments	56	32				(24)	64
Total	**2,331**	**73**	**70**	**(215)**	**(27)**	**(337)**	**1,895**

Additions in 2018 referred to TIM S.p.A. and consisted mainly of the acquisition of IRU transmission capacity, in view of the payment at the beginning of the contract, and improvements and incremental expenses incurred for movable and immovable third-party assets used on the basis of finance lease agreements.

The increases in finance leasing contracts refers mainly to TIM S.p.A. (58 million euros) and only on a residual basis to the Brazil Business Unit.

Buildings (civil and industrial) includes buildings under finance lease and related building adaptations, fully attributable to TIM S.p.A. The net decrease of 288 million euros ("Other changes" column) reflects 215 million euros for the real estate restructuring and rationalization plan, under which office space and industrial premises will be progressively released, with consequent updates to the estimated life of the renegotiated leases, as the renewal option on some longer-term leases is unlikely to be exercised. Moreover, several properties previously leased were acquired under ownership following the aforementioned real estate space rationalization agreement, resulting in reclassification to owned buildings for a total of 82 million euros (71 million euros for buildings and 11 million euros for improvements).

Plant and equipment mainly includes the recognition of the value of the telecommunications towers sold by the Tim Brasil group to American Tower do Brasil and subsequently repurchased in the form of finance lease. The additions in 2018 related to the progress on the contract for the acquisition of IRU transmission capacity by the Parent.

Other rose by 10 million euros over December 31, 2017 and reflected the effects resulting from recognition, by the Domestic Business Unit of different leases on vehicles as finance leases based on the provisions of IAS 17. This resulted in an overall impact on the balance sheet at December 31, 2018 of 49 million euros in terms of higher tangible assets and related payables for finance leases.

Depreciation and impairment losses have been recorded in the income statement as components of Operating Profit.

The gross carrying amount, accumulated impairment losses and accumulated depreciation at December 31, 2018 and 2017 can be summarized as follows:

	As of December 31, 2017			
	Gross carrying amount	Accumulated impairment losses	Accumulated depreciation	Net carrying amount
	(millions of euros)			
Land	16			16
Buildings (civil and industrial)	3,391	(27)	(1,596)	1,768
Plant and equipment	397		(44)	353
Other	200		(62)	138
Construction in progress and advance payments	56			56
Total	**4,060**	**(27)**	**(1,702)**	**2,331**

	As of December 31, 2018			
	Gross carrying amount	Accumulated impairment losses	Accumulated depreciation	Net carrying amount
	(millions of euros)			
Land	16			16
Buildings (civil and industrial)	2,792	(13)	(1,414)	1,365
Plant and equipment	370		(68)	302
Other	243		(95)	148
Construction in progress and advance payments	64			64
Total	**3,485**	**(13)**	**(1,577)**	**1,895**

At December 31, 2018 and 2017, finance lease payments due in future years and their present value are as follows:

	As of December 31,			
	2018		2017	
	Minimum lease payments	Present value of minimum lease payments	Minimum lease payments	Present value of minimum lease payments
	(millions of euros)			
Within 1 year	227	210	271	234
From 2 to 5 years	993	782	1,031	691
Beyond 5 years	1,745	831	2,878	1,391
Total	**2,965**	**1,823**	**4,180**	**2,316**

	As of December 31,	
	2018	2017
	(millions of euros)	
Future net minimum lease payments	2,965	4,180
Interest portion	(1,142)	(1,864)
Present value of lease payments	**1,823**	**2,316**
Financial lease liabilities	1,948	2,430
Financial receivables for lease contracts	(124)	(114)
Total net finance lease liabilities	**1,823**	**2,316**

At December 31, 2018, adjustments to lease payments based on the ISTAT price index totaled 13 million euros (13 million euros at December 31, 2017) and related to TIM S.p.A.

NOTE 8—INVESTMENTS

INVESTMENTS IN ASSOCIATES AND JOINT VENTURES ACCOUNTED FOR USING THE EQUITY METHOD

Investments in associates and joint ventures accounted for using the equity method are reported below in detail.

	As of December 31,	
	2018	2017
	(millions of euros)	
Tiglio I	5	7
NordCom	5	5
W.A.Y.	3	3
Others	3	2
Total Associates	**16**	**17**
Alfiere	—	—
Total Joint Ventures	**—**	**—**
Total Investments accounted for using the equity method	**16**	**17**

The changes in this item are broken down as follows:

	As of December 31, 2016	Investments	Disposals and reimbursements of capital	Valuation using equity method	As of December 31, 2017
			(millions of euros)		
Tiglio I S.r.l	8			(1)	7
NordCom	5				5
W.A.Y.	3				3
Others	2				2
Total Associates	**18**	**—**	**—**	**(1)**	**17**
Alfiere	—				—
Total Joint Ventures	**—**	**—**	**—**	**—**	**—**
Total Investments accounted for using the equity method	**18**	**—**	**—**	**(1)**	**17**

	As of December 31, 2017	Investments	Disposals and reimbursements of capital	Valuation using equity method	As of December 31, 2018
			(millions of euros)		
Tiglio I S.r.l	7			(2)	5
NordCom	5				5
W.A.Y.	3				3
Others	2			1	3
Total Associates	**17**	**—**	**—**	**(1)**	**16**
Alfiere	—	—	—	—	—
Total Joint Ventures	**—**	**—**	**—**	**—**	**—**
Total Investments accounted for using the equity method	**17**	**—**	**—**	**(1)**	**16**

The item joint ventures related to the investment in Alfiere S.p.A., a company that owns several buildings in the EUR area in Rome, whose value was essentially written down to nil in 2016.

The financial statements as of December 31, 2018 of Alfiere S.p.A. are currently not available. The main aggregated figures prepared with regard to the portion attributable to the TIM Group show amounts referring to the financial statements for 2017.

	2017	
	Alfiere S.p.A.	Telecom Italia Group's share 50%
	(millions of euros)	
Non-current assets	156.6	78.3
Current assets	3.5	1.8
Total assets	**160.1**	**80.1**
Non-current liabilities	142.9	71.5
Current liabilities	13.6	6.8
Total liabilities	**156.5**	**78.3**
Equity	3.6	1.8
Total Equity and liabilities	**160.1**	**80.1**
Profit (loss) for the year	**(5.7)**	**(2.9)**

The list of investments accounted for using the equity method is presented in the Note "List of companies of the TIM Group".

Investments in associates accounted for using the equity method of the TIM Group are not material either individually or in aggregate form.

INVESTMENTS IN STRUCTURED ENTITIES

TIM Group does not hold investments in structured entities.

OTHER INVESTMENTS

Other investments refer to the following:

	As of December 31, 2016	Investments	Disposals and reimbursements of capital	Measurement at fair value	Other changes	As of December 31, 2017
			(millions of euros)			
Assicurazioni Generali	2			1		3
Fin.Priv.	17			3		20
Northgate Comms Tech Innovations Partners L.P. (ex Northgate Telecom Innovations Partners L.P.)	14	3				17
Others	13				(2)	11
Total	**46**	**3**	**—**	**4**	**(2)**	**51**

	As of December 31, 2017	IFRS 9 Adoption	Investments	Disposals and reimbursements of capital	Measurement at fair value	Other changes	As of December 31, 2018
				(millions of euros)			
Assicurazioni Generali	3						3
Fin.Priv.	20				(4)		16
Northgate Comms Tech Innovations Partners L.P. (ex Northgate Telecom Innovations Partners L.P.)	17	(3)	2				16
Others	11	3	1	(1)			14
Total	**51**	**—**	**3**	**(1)**	**(4)**	**—**	**49**

As permitted by IFRS 9, TIM now measures all Other Investments at fair value through other comprehensive income (FVTOCI).

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

NOTE 9—FINANCIAL ASSETS (NON-CURRENT AND CURRENT)

Financial assets (non-current and current) were broken down as follows:

		As of December 31,	
		2018	2017
		(millions of euros)	
Non-current financial assets			
Securities, financial receivables and other non-current financial assets:			
Securities other than investments		—	—
Receivables from employees		43	47
Financial receivables for lease contracts		54	69
Hedging derivatives relating to hedged items classified as non-current assets/liabilities of a financial nature		1,490	1,495
Non-hedging derivatives		7	7
Other financial receivables		—	150
Total non-current financial assets	**(A)**	**1,594**	**1,768**
Current financial assets			
Securities other than investments			
Held for trading		—	—
Held to maturity		—	—
Available for sale		—	993
Measured at amortized cost (AC)		—	—
Measured at fair value through other comprehensive income (FVTOCI)		945	—
Measured at fair value through profit or loss (FVPTL)		181	—
		1,126	**993**
Financial receivables and other current financial assets:			
Liquid assets with banks, financial institutions and post offices (with a maturity greater than 3 months)		—	100
Receivables from employees		14	16
Financial receivables for lease contracts		70	45
Hedging derivatives relating to hedged items classified as current assets/liabilities of a financial nature		242	260
Non-hedging derivatives		12	15
Other short-term financial receivables		2	1
		340	**437**
Cash and cash equivalents		**1,917**	**3,575**
Total current financial assets	**(B)**	**3,383**	**5,005**
Financial assets relating to Discontinued operations/ Non-current assets held for sale	**(C)**	**—**	**—**
Total non-current and current financial assets	**(A+B+C)**	**4,977**	**6,773**

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

Financial receivables for lease contracts refer to:

- Teleleasing lease contracts entered into directly with customers in previous years and for which TIM is the guarantor;
- the portion of rental contracts, with the rendering of accessory services;
- finance leases on user rights and equipment.

Hedging derivatives relating to hedged items classified as non-current assets/liabilities of a financial nature mainly refer to the mark-to-market spot valuation component of the hedging derivatives, whereas hedging derivatives relating to hedged items classified as current assets/liabilities of a financial nature also include accrued income on derivative contracts.

The Non-hedging derivatives consist of the mark-to-market component of the non-hedging derivatives of the Brazil Business Unit.

Further details are provided in the Note "Derivatives".

Securities other than investments included in current financial assets relate to:

- 945 million euros of listed securities, of which 558 million euros of Italian treasury bonds purchased by TIM S.p.A. (252 million euros), Telecom Italia Finance S.A. (296 million euros) and INWIT S.p.A. (10 million euros), as well as 387 million euros of bonds purchased by Telecom Italia Finance S.A. with different maturities, all with an active market and consequently readily convertible into cash. Under IFRS 9, such securities are classified as financial assets measured at fair value through other comprehensive income (FVTOCI). The purchases of the above government bonds, which, pursuant to Consob Communication no. DEM/11070007 of August 5, 2011, represent investments in "Sovereign debt securities", have been made in accordance with the Guidelines for the "Management and control of financial risk" adopted by the TIM Group since August 2012, in replacement of the previous policies in force;
- 181 million euros of investments in monetary funds by the Brazil Business Unit, which, under IFRS 9, are classified as financial assets measured at fair value through profit or loss (FVTPL).

Further details are provided in the Note "Accounting standards".

Cash and cash equivalents fell by 1,658 million euros compared to December 31, 2017. The figure breaks down as follows:

	As of December 31,	
	2018	2017
	(millions of euros)	
Liquid assets with banks, financial institutions and post offices	1,694	2,828
Checks, cash and other receivables and deposits for cash flexibility	1	2
Securities other than investments (due within 3 months)	222	745
Total	**1,917**	**3,575**

The different technical forms of investing available cash at December 31, 2018 had the following characteristics:

- maturities: all deposits have a maximum maturity date of three months;
- counterparty risk: deposits have been made with leading high-credit-quality banks and financial institutions with a rating of at least BBB- according to Standard & Poor's with regard to Europe, and with leading local counterparts with regard to investments in South America;
- Country risk: deposits have been made mainly in major European financial markets.

Securities other than investments (due within 3 months) included 221 million euros (744 million euros at December 31, 2017) of Brazilian bank certificates of deposit (Certificado de Depósito Bancário) held by the Brazil Business Unit with premier local banking and financial institutions.

NOTE 10—MISCELLANEOUS RECEIVABLES AND OTHER NON-CURRENT ASSETS

Miscellaneous receivables and other non-current assets fell by 131 million euros compared to December 31, 2017. They included:

		As of December 31,			
		2018		2017	
			Of which Financial Instruments		*Of which Financial Instruments*
		(millions of euros)			
Miscellaneous receivables (non-current)	(a)	**697**	**326**	**704**	**371**
Other non-current assets					
Deferred contract costs		1,531			
Other cost deferrals		63			
Medium/long-term prepaid expenses				1,718	
Total other non-current assets	(b)	**1,594**		**1,718**	
Total	(a+b)	**2,291**	**326**	**2,422**	**371**

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

The impacts caused by the adoption of IFRS 15 are summarized below:

			Adoption of new accounting standards		
		As of December 31, 2018	IFRS 15 reclassifications	IFRS 15 adjustments	As of January 1, 2018
			(millions of euros)		
Miscellaneous receivables (non-current)	(a)	**704**			**704**
Other non-current assets					
Deferred contract costs		—	1,714	(319)	1,395
Other cost deferrals		—	54	—	54
Medium/long-term prepaid expenses		1,718	(1,718)	—	—
Total other non-current assets	(b)	**1,718**	**50**	**(319)**	**1,449**
Total	(a+b)	**2,422**	**50**	**(319)**	**2,153**

For more detailed information on the impacts caused by the adoption of IFRS 15, please refer to the Note "Accounting Standards".

Miscellaneous receivables (non-current) amounted to 697 million euros (704 million euros at December 31, 2017), mainly refer to the Brazil Business Unit (646 million euros); 651 million euros at December 31, 2017). They were related to receivables for court deposits of 307 million euros (349 million euros at December 31, 2017) and current income tax receivables of 88 million euros (96 million euros at December 31, 2017).

Other non-current assets amounted to 1,594 million euros (1,718 million euros at December 31, 2017). They mainly break down as follows:

- Deferred contract costs totaling 1,531 million euros, relating to the deferral of costs connected with the activation and acquisition of new contracts with customers, classified at December 31, 2017 as Medium/long-term prepaid expenses.

Under previous accounting policies, contract costs (incremental costs of obtaining a contract and costs to fulfill a contract) were capitalized or deferred and recognized in the income statement on the basis of the expected duration of the contract and the type of customer.

That approach is substantially confirmed under IFRS 15, with the exception of the reclassification of subscriber acquisition costs (SACs) connected to contracts with lock-in clauses from intangible assets, equal, at January 1, 2018, to 110 million euros (of which 50 million euros medium/long-term).

Activation costs for telephone services are deferred throughout the expected life of the relationship with the customer, taking also into account the reasonable expectations of cash flows arising from these services. The average expected duration at December 31, 2018 was 3 years for mobile business and 7 years for fixed business.

- Other cost deferrals of 63 million euros were attributable mainly to the companies of the Domestic Business Unit.

- Medium/long-term prepaid expenses: no longer present at December 31, 2018 as included in the aforementioned items; as at December 31, 2017, they mainly referred to the Domestic Business Unit and the deferral of costs connected with the activation and acquisition of new contracts with customers.

The breakdown of the total deferred contract costs (non-current and current) at December 31, 2018 is provided below with details of the acquisition costs and costs for executing contracts, as well as their movements during the year:

	As of December 31, 2018 (millions of euros)
Deferred contract cost	
Costs of obtaining a contract	1,132
Costs to fulfil a contract	1,033
Total	**2,165**

	As of January 1, 2018	Increase	Release to income statement	Exchange differences and other changes	As of December 31, 2018
			(millions of euros)		
Costs of obtaining a contract	1,031	473	(367)	(5)	1,132
Costs to fulfil a contract	905	348	(220)	—	1,033
Total	**1,936**	**821**	**(587)**	**(5)**	**2,165**

NOTE 11—INCOME TAXES (CURRENT AND DEFERRED)

Income tax receivables

Non-current and current income tax receivables at December 31, 2018 amounted to 339 million euros (173 million euros at December 31, 2017).

Specifically, they consisted of:

- non-current income tax receivables of 88 million euros (96 million euros at December 31, 2017);

- current income tax receivables of 251 million euros (77 million euros at December 31, 2017), mainly relating to companies belonging to the Brazil Business Unit (78 million euros) and to the Domestic Business Unit (171 million euros).

Deferred tax assets and deferred tax liabilities

The net balance of 944 million euros at December 31, 2018 (728 million euros at December 31, 2017) breaks down as follows.

	As of December 31,	
	2018	2017
	(millions of euros)	
Deferred tax assets	1,136	993
Deferred tax liabilities	(192)	(265)
Total	**944**	**728**

Deferred tax assets mainly consisted of 917 million euros for the Domestic Business Unit (939 million euros at December 31, 2017) and 177 million euros for the Brazil Business Unit. Compared to December 31, 2017, they rose basically following the recognition of deferred tax assets of around 200 million euros, connected with tax recoverability of prior losses recorded in previous years that became recoverable based on the perspective of profits, of the Brazil Business Unit companies.

Deferred tax liabilities mainly consisted of 155 million euros for Telecom Italia Capital (174 million euros at December 31, 2017) and 25 million euros for the Domestic Business Unit (54 million euros at December 31, 2017).

Since the presentation of deferred tax assets and liabilities in the financial statements takes into account the offsets by legal entity when applicable, the composition of the gross amounts before offsets is presented below:

	As of December 31,	
	2018	2017
	(millions of euros)	
Deferred tax assets	1,592	1,429
Deferred tax liabilities	(648)	(701)
Total	**944**	**728**

The temporary differences which made up this line item at December 31, 2018 and 2017, as well as the movements during 2018 were as follows:

	As of December 31, 2017	IFRS 9 adoption	IFRS 15 adoption	Recognized in profit or loss	Recognized in equity	Change in scope of consolidation and other changes	As of December 31, 2018
				(millions of euros)			
Deferred tax assets:							
Tax loss carryforwards	32			181		(8)	205
Derivatives	589			(7)	(9)		573
Provision for bad debts	142	27		11		6	186
Provisions	452			(12)		(8)	432
Taxed depreciation and amortization	106			8			114
Other deferred tax assets	108			(23)	(5)	2	82
Total	**1,429**	**27**	**—**	**158**	**(14)**	**(8)**	**1,592**
Deferred tax liabilities:							
Derivatives	(422)			(1)	2		(421)
Business combinations—for step-up of net assets in excess of tax basis	(131)			4		13	(114)
Deferred gains	(2)				2		—
Accelerated depreciation	(14)						(14)
Other deferred tax liabilities	(132)	11	(8)	35		(5)	(99)
Total	**(701)**	**11**	**(8)**	**38**	**4**	**8**	**(648)**
Total net deferred tax assets (liabilities)	**728**	**38**	**(8)**	**196**	**(10)**	**—**	**944**

The expirations of deferred tax assets and deferred tax liabilities at December 31, 2018 were as follows:

	Within 1 year	Beyond 1 year	Total at December 31, 2018
		(millions of euros)	
Deferred tax assets	383	1,209	1,592
Deferred tax liabilities	(18)	(630)	(648)
Total net deferred tax assets (liabilities)	**365**	**579**	**944**

At December 31, 2018, the TIM Group had unused tax loss carryforwards of 2,163 million euros, mainly relating to the Brazil Business Unit and the company Telecom Italia Finance, with the following expiration dates:

Year of expiration	(millions of euros)
2019	—
2020	—
2021	—
2022	1
2023	—
Expiration after 2023	39
Without expiration	2,123
Total unused tax loss carryforwards	**2,163**

Unused tax loss carryforwards considered in the calculation of deferred tax assets amounted to 609 million euros at December 31, 2018 (91 million euros at December 31, 2017) and mainly referred to the Brazil Business Unit. Deferred tax assets were recognized as it was considered probable that taxable income will be available in the future against which the tax losses can be utilized.

On the other hand, deferred tax assets of 406 million euros (647 million euros at December 31, 2017) were not recognized on 1,554 million euros of tax loss carryforwards since, at the reporting date, their recoverability was not considered probable.

At December 31, 2018, deferred tax liabilities were not recognized on approximately 1 billion euros of tax-suspended reserves and undistributed earnings of subsidiaries, because the TIM Group is in a position to control the timing of the distribution of those reserves and it is probable that those accumulated earnings will not be distributed in the foreseeable future. The contingent liabilities relating to taxes that should be recognized, if these reserves are distributed, are in any case not significant.

Current income tax payables

Income tax payables amounted to 109 million euros (157 million euros at December 31, 2017). They break down as follows:

	At December 31,	
	2018	2017
	(millions of euros)	
Income tax payables:		
Non-current	42	45
Current	67	112
Total	**109**	**157**

Specifically, the non-current portion, amounting to 42 million euros, related entirely to the Brazil Business Unit, while the current portion, amounting to 67 million euros, related primarily to both the Brazil Business Unit (42 million euros) and to the Domestic Business Unit (18 million euros).

Income tax expense

Income tax expense totaled 375 million euros, dropping by 115 million euros compared to 2017 (490 million euros), mainly because of the recognition of deferred tax assets of the Brazil Business Unit (about 200 million euros) connected with tax recoverability of prior losses recognized in the previous years, becoming recoverable based on the perspective of profits of the Business Unit companies.

Income tax expense breaks down as follows:

		2018	2017	2016
		(millions of euros)		
Current taxes for the year		547	646	900
Net difference in prior years estimates		24	(6)	(54)
Total current taxes		**571**	**640**	**846**
Deferred taxes		(196)	(150)	34
Total taxes on continuing operations	**(A)**	**375**	**490**	**880**
Total taxes on Discontinued operations/Non-current assets held for sale	**(B)**	**—**	**—**	**48**
Total income tax expense for the year	**(A+B)**	**375**	**490**	**928**

The reconciliation between the theoretical tax expense, using the IRES tax rate in force in Italy (24%), and the effective tax expense for the years ended December 31, 2018, 2017 and 2016 is the follows:

		2018	2017	2016
		(millions of euros)		
Profit (loss) before tax from continuing operations		**(777)**	**1,777**	**2,799**
Theoretical income tax from continuing operations		**(186)**	**426**	**770**
Income tax effect on increases (decreases) in variations:				
Tax losses of the year not considered recoverable		9	3	17
Tax losses from prior years not recoverable (recoverable) in future years		(225)	(2)	(1)
Non-deductible goodwill impairment charge		621	—	—
Effect of change in IRES tax rate		—	—	25
Prior years' IRES		25	(26)	(38)
Brazil: different rate compared to theoretical rate in force in Italy		44	34	11
Brazil: incentive on investments in the north-east of the country		(34)	(31)	(31)
Other net differences		(19)	(55)	(26)
Effective income tax recognized in income statement from continuing operations, excluding IRAP tax		**235**	**349**	**727**
IRAP tax		140	141	153
Total effective income tax recognized in income statement from continuing operations	**(A)**	**375**	**490**	**880**
Effective income tax recognized in income statement from Discontinued operations/Non-current assets held for sale	**(B)**	**—**	**—**	**48**
Total effective income tax recognized in income statements	**(A+B)**	**375**	**490**	**928**

For the analysis of the tax burden related to the Profit (loss) before tax from continuing operations, the impact of IRAP tax has not been taken into consideration in order to avoid any distorting effect, since that tax only applies to Italian companies and is calculated on a tax base other than pre-tax profit.

NOTE 12—INVENTORIES

Inventories increased by 99 million euros compared to December 31, 2017 and consisted of the following:

	As of December 31,	
	2018	2017
	(millions of euros)	
Raw materials and supplies	1	1
Work in progress and semi-finished products	1	3
Finished goods	387	286
Total	**389**	**290**

The inventories mainly consist of equipment, handsets fixed and mobile telecommunications and relative accessories, as well as office products, special printers and gaming terminals.

Inventories mainly consisted of 348 million euros for the Domestic Business Unit (259 million euros at December 31, 2017) and 41 million euros for the Brazil Business Unit (31 million euros at December 31, 2017).

Inventories are stated net of a provision for bad debts amounting to 11 million euros (13 million euros at December 31, 2017).

NOTE 13—TRADE AND MISCELLANEOUS RECEIVABLES AND OTHER CURRENT ASSETS

Trade and miscellaneous receivables and other current assets fell by 253 million euros compared to December 31, 2017. The figure breaks down as follows.

		As of December 31,			
		2018		2017	
			Of which Financial Instruments		Of which Financial Instruments
		(millions of euros)			
Amounts due on construction contracts	**(a)**	**55**		**34**	
Trade receivables					
Receivables from customers		2,290	2,290	2,528	2,528
Receivables from other telecommunications operators		1,037	1,037	972	972
	(b)	**3,327**	**3,327**	**3,500**	**3,500**
Miscellaneous receivables (current)					
Other receivables	**(c)**	424	125	645	154
Other current assets					
Activities deriving from contracts (Contract Assets)		46	46		
Deferred contract costs		634			
Other cost deferrals		220			
Trade and miscellaneous prepaid expenses				780	
	(d)	**900**	**46**	**780**	**—**
Total		**4,706**	**3,498**	**4,959**	**3,654**

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

The impacts caused by the adoption of IFRS 9 and IFRS 15 are summarized below:

		As of December 31, 2017	Adoption of new standards: IFRS 15 *reclassifications*	Adoption of new standards: IFRS 9 *adjustments*	Adoption of new standards: IFRS 15 *adjustments*	As of January 1, 2018
		(millions of euros)				
Amounts due on construction contracts	**(a)**	**34**	**—**	**—**	**—**	**34**
Trade receivables						
Receivables from customers		2,528	—	(141)	—	2,387
Receivables from other telecommunications operators		972	—	(6)	—	966
	(b)	**3,500**	**—**	**(147)**	**—**	**3,353**
Miscellaneous receivables (current)						
Other receivables	**(c)**	**645**	**—**	**—**	**—**	**645**
Other current assets						
Activities deriving from contracts (Contract Assets)		—	—	—	35	35
Deferred contract costs		—	594	—	(53)	541
Other cost deferrals		—	246	—	—	246
Trade and miscellaneous prepaid expenses		780	(780)	—	—	—
	(d)	**780**	**60**	**—**	**(18)**	**822**
Total	**(a+b+c+d)**	**4,959**	**60**	**(147)**	**(18)**	**4,854**

For more detailed information on the impacts caused by the adoption of IFRS 9 and IFRS 15, please refer to the Note "Accounting Standards".

The analyses of the aging of trade and miscellaneous receivables at December 31, 2018 and 2017 are provided below:

	As of December 31, 2018	Total Current	Total overdue	Overdue: 0-90 days	Overdue: 91-180 days	Overdue: 181-365 days	Overdue: More than 365 days
	(millions of euros)						
Trade and miscellaneous receivables and other current assets	**3,498**	**2,715**	**783**	**175**	**134**	**158**	**316**

	As of December 31, 2017	Total Current	Total overdue	Overdue: 0-90 days	Overdue: 91-180 days	Overdue: 181-365 days	Overdue: More than 365 days
	(millions of euros)						
Trade and miscellaneous receivables and other current assets	**3,654**	**2,781**	**873**	**300**	**178**	**188**	**207**

Overdue receivables fell by 66 million euros compared to December 31, 2017. The main contributors to this decrease are TIM S.p.A. (73 million euros) and Olivetti S.p.A. (14 million euros), while for the Brazil Business Unit there was an increase of 25 million euros, net of a negative exchange rate effect for approximately 54 million euros.

Overdue receivables fell by 90 million euros compared to December 31, 2017 of which 62 million euros refer to TIM S.p.A.. The Brazil Business Unit also showed a drop, equal to 3 million euros and net of a negative exchange difference of approximately 15 million euros.

The growth of receivables overdue by more than 365 days is mainly attributable to the Parent's greater receivables with other telecommunications operators.

Trade receivables amounted to 3,327 million euros (3,500 million euros at December 31, 2017) and are stated net of the provision for bad debts of 769 million euros (597 million euros at December 31, 2017). They included 39 million euros (43 million euros at December 31, 2017) of medium/long-term receivables, principally in respect of agreements for the sale of Indefeasible Rights of Use (IRU).

Trade receivables mainly related to TIM S.p.A. (2,268 million euros) and to the Brazil Business Unit (669 million euros).

Movements in the provision for bad debts were as follows:

	2018	2017
	(millions of euros)	
At January 1	**597**	**648**
Effects of IFRS 9 adoption	147	
Provision charges to the income statement	320	242
Utilization and decreases	(281)	(278)
Exchange differences and other changes	(14)	(15)
At December 31	**769**	**597**

The application of the new standard IFRS 9 (Financial Instruments) resulted in the recognition at January 1, 2018 of 147 million euros of higher write-downs for expected credit losses on trade receivables, due to the introduction of the expected credit loss model as per IFRS 9, replacing the incurred loss model required by IAS 39.

Miscellaneous receivables (current) refer to other receivables amounting to 424 million euros (645 million euros at December 31, 2017) and were net of a provision for bad debts of 52 million euros (54 million euros at December 31, 2017). Details are as follows:

	As of December 31,	
	2018	2017
	(millions of euros)	
Advances to suppliers	24	69
Receivables from employees	11	12
Tax receivables	87	135
Receivables for grants from the government and public entities	91	207
Sundry receivables	211	222
Total	**424**	**645**

Tax receivables included, *inter alia*, 70 million euros relating to the Brazil Business Unit, largely with reference to local indirect taxes, and 3 million euros relating to the Domestic Business Unit, partly represented by tax return credits, other tax credits, and the VAT receivable on the purchase of cars and related accessories for which refunds were requested under Italian Decree Law 258/2006, converted with amendments by Italian Law 278/2006.

Receivables for grants from the government and public entities (91 million euros) referred mainly to the Ultra-Broadband-UBB and Broadband-BB projects. The grants are recognized to the income statement when the related plants become ready for use.

Sundry receivables mainly included:

- receivables for with-recourse assignments to other factoring companies (60 million euros);

- receivables from social security and assistance agencies due to TIM S.p.A. (23 million euros);
- miscellaneous receivables due to TIM S.p.A. from other licensed TLC operators (42 million euros).

Other current assets included:

- **Contract assets**: the item, totaling 35 million euros, was introduced at January 1, 2018 in light of the adoption of IFRS 15 due to early recognition of revenues for those contracts including performance obligations with different recognition time schedules (such as bundled goods and services) in which the goods (recognized "at point in time") are sold at a discounted price or for those contracts that include a discount for a time period under the minimum contractual term. Contract Assets amounted to 46 million euros at December 31, 2018 and are stated net of the relevant provision of 3 million euros for bad debts. The increase of the year, due to early recognition of revenues with resulting recognition of the Contract Asset, is associated with the recognition of bundle offers of goods and services entailing giving the customer a discount for a period less than the minimum contractual term (usually 6 or 12 months in 24-month contracts), and with the contractual amendments introduced following changes in pricing, for new subscribed services and discounts granted to customers.
- **Deferred contract costs** amounted to 634 million euros and mainly refer to the deferral of costs connected with the activation and acquisition of new contracts with customers (which at December 31, 2017 were classified as Trade and miscellaneous prepaid expenses).

  Under previous accounting policies, contract costs (incremental costs of obtaining a contract and costs to fulfill a contract) were capitalized or deferred and recognized in the income statement on the basis of the expected duration of the contract and the type of customer. That approach is substantially confirmed under IFRS 15, with the exception of the reclassification of subscriber acquisition costs (SACs) connected to contracts with lock-in clauses from intangible assets, equal, at January 1, 2018, to 110 million euros (of which 60 million euros short-term). Contract costs from the activation of the phone service are deferred throughout the expected life of the relationship with the customer, taking also into account the reasonable expectations of cash flows arising from these services. The average expected duration at December 31, 2018 was 3 years for mobile business and 7 years for fixed business.

  For additional details on the deferred contract costs and their movement during the year, please refer to the Note "Miscellaneous receivables and other non-current assets".
- **Other cost deferrals** relating:
  - to the Parent, primarily for deferred costs connected with rent payments (59 million euros), building leases (17 million euros), insurance premiums (5 million euros) and maintenance fees (2 million euros);
  - to INWIT S.p.A. for 24 million euros in advance lease payments;
  - to the Brazil Business Unit, mainly relating to marketing and insurance premiums for approximately 17 million euros.
- **Trade and miscellaneous prepaid expenses**, no longer present at December 31, 2018 as included in the previous items; trade and miscellaneous prepaid expenses totaled 780 million euros at December 31, 2017. The item referred mainly to the Parent and referred to cost deferrals for the activation and acquisition of new contracts with customers, building leases, rent and maintenance, and insurance premiums.

NOTE 14—DISCONTINUED OPERATIONS/NON-CURRENT ASSETS HELD FOR SALE

On March 8, 2016, the TIM Group completed the sale of the remaining interest in Sofora -Telecom Argentina following approval by the Enacom, the Argentinian communications regulatory authority.

The total amount from the transaction was over 960 million USD, including:

- 550.6 million USD received on March 8, 2016 for the investment in Sofora-Telecom Argentina. The impact on the statement of cash flows (item "Proceeds from sale that result in a loss of control of subsidiaries or other businesses, net of cash disposed of") was 492 million euros;

- 50 million USD, also received on March 8, 2016, from other shareholders of Sofora-Telecom Argentina, with respect to ancillary agreements to the transaction;
- 329.5 million USD received previously in connection with sales of investments and other associated assets to Fintech, completed between December 2013 and October 2014; and
- 30 million USD generated by making technical support services available to Telecom Argentina group companies.

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Below is a summary of the income statement impacts from the Sofora—Telecom Argentina group and its sale. The figures for 2016 have been translated at the average exchange rate for the period January 1 – March 8 (15.7981 pesos per euro), whereas the figures for 2015 have been translated at the annual average exchange rate (10.2689 pesos per euro).

		Year ended December 31,		
		2018	2017	1.1-3.8 2016
		(millions of euros)		
Income statement effects from Discontinued operations/ Non-current assets held for sale:				
Revenues		—	—	504
Other income		—	—	1
Operating expenses		—	—	(372)
Gains (losses) on disposals of non-current assets		—	—	—
Goodwill and other non-current assets net impairment losses		—	—	—
Operating profit (loss)		—	—	**133**
Finance income (expenses)		—	—	(42)
Profit (loss) before tax from Discontinued operations/ Non-current assets held for sale		—	—	**91**
Income tax expense		—	—	(32)
Profit (loss) after tax from Discontinued operations/ Non-current assets held for sale	**(A)**	—	—	**59**
Other minor income statement effects:				
Other income/(expenses) connected to sales in previous years		—	—	
Other minor entries		—	—	
	(B)	—	—	—
Profit (loss) from Discontinued operations/Non-current assets held for sale	**(C=A+B)**	—	—	**59**
Income statement effects on the selling entities:				
Net gains on disposal		—	—	307
Transfer to the separate consolidated dated income statement of the Reserve for exchange differences on translating foreign operations		—	—	(304)
Income tax expense relating to the disposal		—	—	(15)
	(D)	—	—	**(12)**
Profit (loss) from Discontinued operations/Non-current assets held for sale	**(C+D)**	—	—	**47**
Attributable to:		—	—	
Owners of the Parent		—	—	*(3)*
Non-controlling interests		—	—	*50*

The earnings per share from Discontinued operations/Non-current assets held for sale, for 2018, 2017 and 2016 are shown in the table below:

	Year ended December 31,		
	2018	2017	1.1-3.8 2016
		(Euros)	
Basic and Diluted Earnings Per Share (EPS) from Discontinued operations/ Non-current assets held for sale (*)			
Ordinary Share	—	—	—
Savings Share	—	—	—

(*) Basic EPS is equal to Diluted EPS.

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Within the consolidated statements of cash flows the net impacts, expressed in terms of contribution to the consolidation, of the "Discontinued operations/Non-current assets held for sale" are broken down as follows:

	Year ended December 31,		
	2018	2017	1.1-3.8 2016
		(millions of euros)	
Discontinued operations/Non-current assets held for sale:			
Cash flows from (used in) operating activities	—	—	130
Cash flows from (used in) investing activities	—	—	(117)
Cash flows from (used in) financing activities	—	—	(58)
Total	**—**	**—**	**(45)**

NOTE 15—EQUITY

Equity consisted of:

	As of December 31,	
	2018	2017
	(millions of euros)	
Equity attributable to owners of the Parent	19,528	21,557
Non-controlling interests	2,219	2,226
Total	**21,747**	**23,783**

The composition of the "**Equity attributable to owners of the Parent"** is the following:

	As of December 31,	
	2018	2017
	(millions of euros)	
Share capital	11,587	11,587
Additional paid-in capital	2,094	2,094
Other reserves and retained earnings (accumulated losses), including profit (loss) for the year(*)	5,847	7,876
Total	**19,528**	**21,557**

(*) of which:

Reserve for financial assets measured at fair value through other comprehensive income (*)	*30*	*42*
Reserve for hedging instruments	*(563)*	*(582)*
Reserve for exchange differences on translating foreign operations	*(1,340)*	*(955)*
Reserve for remeasurements of employee defined benefit plans (IAS 19)	*(90)*	*(104)*
Share of other comprehensive income (loss) of associates and joint ventures accounted for using the equity method	—	—
Sundry reserves and retained earnings (accumulated losses), including profit (loss) for the year	*7,810*	*9,475*

(*) At December 31, 2017 the item included the "Reserve for available-for-sale financial assets".

Movements in Share Capital in 2018, amounting to 11,587 million euros, net of treasury shares of 90 million euros, are shown in the tables below:

Reconciliation between the number of outstanding shares at December 31, 2015 and December 31, 2016

	Shares as of December 31, 2015	Shares issued for the full convertion of the Mandatory Convertible Bond due 2016	Shares as of December 31, 2016	Percentage of Share Capital
	(number of shares)			
Ordinary Shares issued (a)	13,499,911,771	1,703,210,812	15,203,122,583	71.61%
Less: Treasury Shares (b)	(163,754,388)	—	(163,754,388)	
Ordinary Shares Outstanding (c)	13,336,157,383	1,703,210,812	15,039,368,195	
Savings Shares Issued and Outstanding (d)	6,027,791,699	—	6,027,791,699	28.39%
Total TIM S.p.A. shares issued (a+d)	**19,527,703,470**	**1,703,210,812**	**21,230,914,282**	**100.00%**
Total TIM S.p.A. shares outstanding (c+d)	**19,363,949,082**	**1,703,210,812**	**21,067,159,894**	

Reconciliation between the number of outstanding shares at December 31, 2016 and December 31, 2017

	Shares as of December 31, 2016	Share issues	Shares as of December 31, 2017	Percentage of Share Capital
		(number of shares)		
Ordinary Shares issued (a)	15,203,122,583	—	15,203,122,583	71.61%
Less: Treasury Shares (b)	(163,754,388)		(163,754,388)	
Ordinary Shares Outstanding (c)	15,039,368,195	—	15,039,368,195	
Savings Shares Issued and Outstanding (d)	6,027,791,699		6,027,791,699	28.39%
Total TIM S.p.A. shares issued (a+d)	**21,230,914,282**	**—**	**21,230,914,282**	**100.00%**
Total TIM S.p.A. shares outstanding (c+d)	**21,067,159,894**	**—**	**21,067,159,894**	

Reconciliation between the number of outstanding shares at December 31, 2017 and December 31, 2018

	Shares as of December 31, 2017	Share issues	Shares as of December 31, 2018	Percentage of Share Capital
		(number of shares)		
Ordinary Shares issued (a)	15,203,122,583	—	15,203,122,583	71.61%
Less: Treasury Shares (b)	(163,754,388)		(163,754,388)	
Ordinary Shares Outstanding (c)	15,039,368,195	—	15,039,368,195	
Savings Shares Issued and Outstanding (d)	6,027,791,699		6,027,791,699	28.39%
Total TIM S.p.A. shares issued (a+d)	**21,230,914,282**	**—**	**21,230,914,282**	100.00%
Total TIM S.p.A. shares outstanding (c+d)	**21,067,159,894**	**—**	**21,067,159,894**	

Reconciliation between the value of the outstanding shares as of December 31, 2015 and December 31, 2016

	Share capital as of December 31, 2015	Change in share capital as a result of the full convertion of the Mandatory Convertible Bond due 2016	Share capital as of December 31, 2016
		(millions of euros)	
Ordinary Shares issued (a)	7,425	937	8,362
Less: Treasury Shares (b)	(90)	—	(90)
Ordinary Shares Outstanding (c)	7,335	937	8,272
Savings Shares Issued and Outstanding (d)	3,315	—	3,315
Total TIM S.p.A. share capital issued (a+d)	**10,740**	**937**	**11,677**
Total TIM S.p.A. share capital outstanding (c+d)	**10,650**	**937**	**11,587**

Reconciliation between the value of the outstanding shares as of December 31, 2016 and December 31, 2017

	Share capital as of December 31, 2016	Change in share capital	Share capital as of December 31, 2017
		(millions of euros)	
Ordinary Shares issued (a)	8,362	—	8,362
Less: Treasury Shares (b)	(90)	—	(90)
Ordinary Shares Outstanding (c)	8,272	—	8,272
Savings Shares Issued and Outstanding (d)	3,315	—	3,315
Total TIM S.p.A. share capital issued (a+d)	**11,677**	**—**	**11,677**
Total TIM S.p.A. share capital outstanding (c+d)	**11,587**	**—**	**11,587**

Reconciliation between the value of the outstanding shares as of December 31, 2017 and December 31, 2018

	Share capital as of December 31, 2017	Change in share capital	Share capital as of December 31, 2018
		(millions of euros)	
Ordinary Shares issued (a)	8,362	—	8,362
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Ordinary Shares Outstanding (c)	8,272	—	8,272
Savings Shares Issued and Outstanding (d)	3,315	—	3,315
Total TIM S.p.A. share capital issued (a+d)	**11,677**	**—**	**11,677**
Total TIM S.p.A. share capital outstanding (c+d)	**11,587**	**—**	**11,587**

The total value of the ordinary treasury shares at December 31, 2018, amounting to 510 million euros, was recorded as follows: the part relating to accounting par value (90 million euros) was recognized as a deduction from share capital issued and the remaining part as a deduction from Other reserves and retained earnings (accumulated losses), including profit (loss) for the year.

Share capital information

The TIM S.p.A. ordinary and savings shares are listed respectively in Italy (FTSE index) and on the NYSE in the form of American Depositary Shares, each ADS corresponding to 10 shares of ordinary or savings shares, respectively, represented by American Depositary Receipts (ADRs) issued by JPMorgan Chase Bank.
In the shareholder resolutions passed to increase share capital against cash payments, the pre-emptive right can be excluded to the extent of a maximum of ten percent of the pre-existing share capital, on condition that the issue price corresponds to the market price of the shares and that this is confirmed in a specific report issued by the firm charged with the audit of the Company.

The Group sources itself with the capital necessary to fund its requirements for business development and operations; the sources of funds are found in a balanced mix of equity, permanently invested by the shareholders, and debt capital, to guarantee a balanced financial structure and minimize the total cost of capital, with a resulting advantage to all the stakeholders.

Debt capital is structured according to different maturities and currencies to ensure an adequate diversification of the sources of funding and an efficient access to external sources of financing (taking advantage of the best opportunities offered in the financial markets of the euro, U.S. dollar and Pound sterling areas to minimize costs), taking care to reduce the refinancing risk.

The remuneration of equity is proposed by the board of directors to the shareholders' meeting, which meets to approve the annual financial statements, based upon market trends and business performance, once all the other

obligations are met, including debt servicing. Therefore, in order to guarantee an adequate remuneration of capital, safeguard company continuity and business development, the Group constantly monitors the change in debt levels in relation to equity, the level of net debt and the operating margin of industrial operations.

Rights of savings shares

The rights of the TIM S.p.A. savings shares are indicated below:

- the profit shown in the duly approved separate financial statements, less the amount appropriated to the legal reserve, must be distributed to the holders of savings shares in an amount up to 5% of the 0.55 euros per share;
- after assigning preferred dividends to the savings shares, the distribution of which is approved by the shareholders' meeting, the remaining profit shall be assigned to all the shares so that the savings shares have the right to dividends that are higher, than the dividends to which the ordinary shares are entitled, by 2% of 0.55 euros per share;
- if in any one year dividends of below 5% of the 0.55 euros per share are paid to the savings shares, the difference is carried over and added to the preferred dividends for the next two successive years;
- in the case of the distribution of reserves, the savings shares have the same rights as ordinary shares. Moreover, when there is no profit or insufficient profit reported in the separate financial statements for the year to satisfy the rights of the savings shares, the shareholders' meeting called to approve those separate financial statements may choose to satisfy the dividend right and/or the additional right by distributing available reserves. The distribution of available reserves for such payments excludes the application of the mechanism extending the right to the preferred dividend not paid through the distribution of profits for the following two years;
- the reduction of share capital as a result of losses does not affect the savings shares except for the amount of the loss which is not covered by the portion of the share capital represented by the other shares;
- upon the wind-up of TIM S.p.A., the savings shares have a pre-emptive right in the reimbursement of capital up to the amount of 0.55 euros per share;
- in the event of the cessation of trading in the Company's ordinary or savings shares, the holder of savings shares may ask TIM S.p.A. to convert its shares into ordinary shares, according to the manner resolved by the special session of the shareholders' meeting called for that purpose within two months of being excluded from trading.

Additional paid-in capital, amounting to 2,094 million euros, was unchanged with respect to December 31, 2017.

Other reserves moved through the Statements of comprehensive income comprised:

- The **Reserve for financial assets measured at fair value through other comprehensive income**, which had a positive balance of 30 million euros at December 31, 2018, showed a decrease of 12 million euros compared to December 31, 2017 and also included the Reserve for available-for-sale financial assets. The adoption, from January 1, 2018, of the new IFRS 9 standard, resulted in a growth of 9 million euros, offset by a decrease related to unrealized losses on the securities portfolio of Telecom Italia Finance (7 million euros), to the negative fair value adjustment of other financial assets held by the Parent TIM (10 million euros) and to the unrealized losses on the interests in Assicurazioni Generali and Fin.Priv. of the Parent TIM (4 million euros). This reserve is stated net of deferred tax liabilities of 9 million euros (at December 31, 2017, it was stated net of deferred tax liabilities of 11 million euros).
- The **Reserve for cash flow hedges** had a negative balance of 563 million euros at December 31, 2018, (negative 582 million euros at December 31, 2017). This reserve is stated net of deferred tax assets of 157 million euros (at December 31, 2017, it was stated net of deferred tax assets of 164 million euros). In particular, this reserve includes the effective portion of gains or losses on the fair value adjustments of derivatives designated as cash flow hedges of the exposure to volatility in the cash flows of assets or liabilities recognized in the financial statements ("cash flow hedge").

- The **Reserve for exchange differences on translating foreign operations** showed a negative balance of 1,340 million euros at December 31, 2018 (negative 955 million euros at December 31, 2017) and mainly related to exchange differences resulting from the translation into euros of the financial statements of companies belonging to the Brazil Business Unit (negative 1,360 million euros versus negative 969 million euros at December 31, 2017).
- The **Reserve for re-measurements of employee defined benefit plans**, which had a negative balance of 90 million euros, rose by 14 million euros compared to December 31, 2017. This reserve is stated net of deferred tax assets of 21 million euros (at December 31, 2017, it was stated net of deferred tax assets of 26 million euros). In particular, this reserve includes the recognition of changes in actuarial gains (losses).
- The **Share of other profits (losses) of associates and joint ventures** accounted for using the equity method, was nil at both December 31, 2018 and at December 31, 2017.

Other sundry reserves and retained earnings (accumulated losses), including profit (loss) for the year, amounted to 7,810 million euros, showing a decrease of 1,665 million euros, as detailed below:

	Year ended December 31,	
	2018	2017
	(millions of euros)	
IFRS 9 and IFRS 15 Adoption	(92)	—
Profit (loss) for the year attributable to Owners of the Parent	(1,411)	1,121
Dividends approved—TIM S.p.A.	(166)	(166)
Grant of equity instruments	2	(6)
Other changes	2	9
Change for the year in Sundry reserves and retained earnings (accumulated losses), including profit (loss) for the year	(1,665)	958

The dividends paid by TIM S.p.A., amounting to 166 million euros in 2018 and in 2017, relate to savings shares with a dividend per share of 0.0275 euros.

Non-controlling interests amounted to 2,219 million euros, mainly relating to companies belonging to the Brazil Business Unit (1,518 million euros) and the company Inwit (620 million euros), showing a drop of 7 million euros compared to December 31, 2017, as detailed below:

	Year ended December 31,	
	2018	2017
	(millions of euros)	
IFRS 9 and IFRS 15 Adoption	(5)	—
Profit (loss) for the year attributable to Non-controlling interests	259	166
Group Company dividends paid to non-controlling shareholders	(115)	(64)
Changes in the Reserve for exchange differences on translating foreign operations	(169)	(236)
Other changes	23	14
Change for the year in Equity attributable to Non-Controlling interests	**(7)**	**(120)**

The dividends of Group companies to minority shareholders refer mainly to INWIT for 46 million euros (35 million euros in 2017) and the Brazil Business Unit for 66 million euros (25 million euros in 2017).

The Reserve for exchange differences on translating foreign operations attributable to non-controlling interests showed a negative balance of 640 million euros at December 31, 2018 (negative 471 million euros at December 31, 2017), relating entirely to exchange differences arising from the translation into euros of the financial statements of the companies belonging to the Brazil Business Unit.

Future Potential changes in share capital

"Future potential changes in share capital" are presented in the Note "Earnings per share".

NOTE 16—FINANCIAL LIABILITIES (NON—CURRENT AND CURRENT)

Non-current and current financial liabilities (gross financial debt) were broken down as follows:

		As of December 31, 2018	As of December 31, 2017
		(millions of euros)	
Financial payables (medium/long-term):			
Bonds		16,686	18,119
Convertible Bonds		1,893	1,862
Amounts due to banks		3,160	3,798
Other financial payables		155	161
		21,894	**23,940**
Finance lease liabilities (medium/long-term)		**1,740**	**2,249**
Other financial liabilities (medium/long-term):			
Hedging derivatives relating to hedged items classified as non-current assets/liabilities of a financial nature		1,423	1,914
Non-hedging derivatives		2	5
Other liabilities		—	—
		1,425	**1,919**
Total Non-current financial liabilities	**(A)**	**25,059**	**28,108**
Financial payables (short-term):			
Bonds		2,912	2,215
Convertible Bonds		6	6
Amounts due to banks		2,385	2,183
Other financial payables		64	96
		5,367	**4,500**
Finance lease liabilities (short-term)		**208**	**181**
Other financial liabilities (short-term):			
Hedging derivatives relating to hedged items classified as current assets/liabilities of a financial nature		338	71
Non-hedging derivatives		—	4
Other liabilities		—	—
		338	**75**
Total Current financial liabilities	**(B)**	**5,913**	**4,756**
Financial liabilities directly associated with Discontinued operations/ Non-current assets held for sale	**(C)**	**—**	**—**
Total Financial liabilities (Gross financial debt)	**(A+B+C)**	**30,972**	**32,864**

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

Gross financial debt according to the original currency of the transaction is as follows:

	As of December 31, 2018		As of December 31, 2017	
	(millions of foreign currency)	(millions of euros)	(millions of foreign currency)	(millions of euros)
USD	6,450	5,633	7,168	5,977
GBP	1,267	1,416	1,266	1,427
BRL	2,609	588	5,863	1,478
JPY	20,033	159	20,031	148
EURO	—	23,176	—	23,834
Total		**30,972**		**32,864**

The breakdown of gross financial debt by effective interest rate bracket related to the original transaction excluding the effect of any hedging instruments, is provided below:

	As of December 31,	
	2018	2017
	(millions of euros)	
Up to 2.5%	5,173	5,005
From 2.5% to 5%	10,534	10,571
From 5% to 7.5%	10,130	11,265
From 7.5% to 10%	2,209	2,690
Over 10%	443	589
Accruals/deferrals, MTM and derivatives	2,483	2,744
Total	**30,972**	**32,864**

Following the use of derivative hedging instruments, on the other hand, the gross financial debt by nominal interest rate bracket is:

	As of December 31,	
	2018	2017
	(millions of euros)	
Up to 2.5%	12,667	13,071
From 2.5% to 5%	7,881	6,631
From 5% to 7.5%	6,155	7,366
From 7.5% to 10%	1,343	1,849
Over 10%	443	1,203
Accruals/deferrals, MTM and derivatives	2,483	2,744
Total	**30,972**	**32,864**

The maturities of financial liabilities according to the expected nominal repayment amount, as defined by contract, are the following:

Details of the maturities of Financial liabilities—at nominal repayment amount:

	Maturing by December 31, of the year						
	2019	2020	2021	2022	2023	After 2023	Total
	(millions of euros)						
Bonds	2,446	1,267	564	3,087	2,419	11,238	21,021
Loans and other financial liabilities	1,293	384	1,343	819	331	221	4,391
Finance lease liabilities	190	181	172	132	130	1,124	1,929
Total	**3,929**	**1,832**	**2,079**	**4,038**	**2,880**	**12,583**	**27,341**
Current financial liabilities	1,308	—	—	—	—	—	1,308
Total	**5,237**	**1,832**	**2,079**	**4,038**	**2,880**	**12,583**	**28,649**

The main components of financial liabilities are commented below.

Bonds were broken down as follows:

	As of December 31,	
	2018	2017
	(millions of euros)	
Non-current portion	16,686	18,119
Current portion	2,912	2,215
Total carrying amount	**19,598**	**20,334**
Fair value adjustment and measurement at amortized cost	(577)	(559)
Total nominal repayment amount	**19,021**	**19,775**

The **convertible bonds** consist of the unsecured equity-linked bond for 2,000 million euros, with a coupon of 1.125%, issued by TIM S.p.A., convertible into newly-issued ordinary shares, maturing in 2022. This item was broken down as follows:

	As of December 31,	
	2018	2017
	(millions of euros)	
Non-current portion	1,893	1,862
Current portion	6	6
Total carrying amount	**1,899**	**1,868**
Fair value adjustment and measurement at amortized cost	101	132
Total nominal repayment amount	**2,000**	**2,000**

The nominal repayment amount of bonds and convertible bonds totaled 21,021 million euros, down by 754 million euros compared to December 31, 2017 (21,775 million euros) as a result of new issues, repayments and the exchange effect in 2018.

The following table lists the bonds issued by companies of the TIM Group, by issuing company, expressed at the nominal repayment amount, net of bond repurchases, and also at market value:

Currency	Amount (millions)	Nominal repayment amount (millions of euros)	Coupon	Issue date	Maturity date	Issue price (%)	Market price as of December 31, 2018 (%)	Market value as of December 31, 2018 (millions of euros)
Bonds issued by TIM S.p.A.								
Euro	832.4	832.4	5.375%	1/29/04	1/29/19	99.070	100.486	836
GBP	850.0	950.2	6.375%	6/24/04	6/24/19	98.850	101.761	967
Euro	719.4	719.4	4.000%	12/21/12	1/21/20	99.184	103.331	743
Euro	547.5	547.5	4.875%	9/25/13	9/25/20	98.966	106.290	582
Euro	563.6	563.6	4.500%	1/23/14	1/25/21	99.447	105.849	597
Euro	(b) 202.7	202.7	6 month Euribor (base 365)	01/01/02	01/01/22	100	100	203
Euro	883.9	883.9	5.250%	02/10/10	02/10/22	99.295	108.430	958
Euro	(c)2,000	2,000	1.125%	3/26/15	3/26/22	100	99.934	1,879
Euro	1,000	1,000	3.250%	1/16/15	1/16/23	99.446	102.010	1,020
GBP	375	419.2	5.875%	5/19/06	5/19/23	99.622	104,518	438
Euro	1,000	1,000	2.500%	1/19/17	7/19/23	99.288	98.417	984
Euro	750	750	3.625%	1/20/16	1/19/24	99.632	103.328	775
USD	1,500	1,310	5.303%	5/30/14	5/30/24	100	95.530	1,251
Euro	1,000	1,000	3.000%	9/30/16	9/30/25	99.806	97.468	975
Euro	750	750	2.875%	06/28/18	01/28/26	100	95.218	714
Euro	1,000	1,000	3.625%	5/25/16	5/25/26	100	99.952	1,000
Euro	1,250	1,250	2.375%	10/12/17	10/12/27	99.185	89.357	1,117
Euro	670	670	5.250%	03/17/05	03/17/55	99.667	97.104	651
Sub-Total		**15,849**						**15,690**
Bonds issued by Telecom Italia Finance S.A. and guaranteed by TIM S.p.A.								
Euro	1,015	1,015	7.750%	01/24/03	01/24/33	(a) 109.646	125.429	1,273
Sub-Total		**1,015**						**1,273**
Bonds issued by Telecom Italia Capital S.A. and guaranteed by TIM S.p.A.								
USD	(d) 759.7	663.4	7.175%	06/18/09	06/18/19	100	101.358	672
USD	1,000	873.4	6.375%	10/29/03	11/15/33	99.558	90.113	787
USD	1,000	873.4	6.000%	10/06/04	09/30/34	99.081	87.489	764
USD	1,000	873.4	7.200%	07/18/06	07/18/36	99.440	96.061	839
USD	1,000	873.4	7.721%	06/04/08	06/04/38	100	99.471	869
Sub-Total		**4,157**						**3,931**
Total		**21,021**						**20,894**

(a) Weighted average issue price for bonds issued with more than one tranche.

(b) Reserved for employees.

(c) Bond convertible into newly-issued TIM S.p.A. ordinary treasury shares.

(d) Net of the securities bought back by TIM S.p.A. on July 20, 2015.

The following table lists the changes in bonds during 2018:

New issues	Currency	Amount (millions of original currency)	Issue date
Telecom Italia S.p.A. 750 million euros 2.875% maturing 01/28/2026	Euro	750	6/28/2018

Repayments	Currency	Amount (millions of original currency)	Repayment date
Telecom Italia S.p.A. 593 million euros 4.750% (1)	Euro	593	5/25/2018
Telecom Italia S.p.A. 677 million US dollars 6.999% (2)	USD	677	6/4/2018
Telecom Italia S.p.A. 582 million euros 6.125% (3)	Euro	582	12/14/2018

(1) Net of buy-backs totaling 157 million euros made by the company in 2015.

(2) Net of the securities bought back by TIM S.p.A. (323 million US dollars) on July 20, 2015.

(3) Net of buy-backs totaling 168 million euros made by the company in 2015.

Medium/long-term **amounts due to banks**, totaling 3,160 million euros (3,798 million euros at December 31, 2017), fell by 638 million euros, due to the exercise of the early repayment option of the bilateral term loan in place at the end of 2017. Short-term amounts due to banks totaled 2,385 million euros (2,183 million euros at December 31, 2017) and included 1,137 million euros of the current portion of medium/long-term amounts due to banks. In addition, Telecom Italia Finance S.A. has *repurchase agreements* on government and corporate securities for 545 million euros maturing in the first quarter of 2019.

Medium/long-term other financial payables totaled 155 million euros (161 million euros at December 31, 2017) and refer to the Telecom Italia Finance S.A. loan for JPY 20,000 million, maturing in 2029. Short-term other financial payables amounted to 64 million euros (96 million euros at December 31, 2017) and included 2 million euros of the current portion of medium/long-term other financial payables.

Medium/long-term **finance lease liabilities** totaled 1,740 million euros (2,249 million euros at December 31, 2017) and mainly related to property leases recognized under IAS 17 using the financial method. Short-term finance lease liabilities amounted to 208 million euros (181 million euros at December 31, 2017) and referred to the current portion of medium/long-term finance lease liabilities. Following the start of the real estate rationalization plan by TIM S.p.A. currently underway and the consequent reconsideration of the likelihood of exercising the option of renewing the real-estate lease agreements at expiry, the liability and the value of the assets held under finance lease were written down by around 215 million euros. Moreover, during 2018, 46 million euros of higher debt for finance leases and higher tangible assets were posted, following the recognition of additional vehicle lease agreements in accordance with IAS 17.

Hedging derivatives relating to items classified as non-current liabilities of a financial nature amounted to 1,423 million euros (1,914 million euros at December 31, 2017). Hedging derivatives relating to items classified as current liabilities of a financial nature totaled 338 million euros (71 million euros at December 31, 2017).

Non-hedging derivatives classified under non-current financial liabilities totaled 2 million euros (5 million euros at December 31, 2017), whereas no non-hedging derivatives classified as current financial liabilities were recorded (4 million euros at December 31, 2017). These also include the measurement of derivatives which, although put into place for hedging purposes, do not possess the formal requisites to be considered as such under IFRS.

Covenants and negative pledges in place at December 31, 2018

Bonds issued by the TIM Group do not contain financial *covenants* (e.g. ratios such as Debt/EBITDA, EBITDA/Interest, etc.) or clauses that result in the automatic early redemption of the bonds in relation to events other

than the insolvency of the TIM Group[1]; furthermore, the repayment of the bonds and the payment of interest are not covered by specific guarantees nor are there commitments provided relative to the assumption of future guarantees, except for the full and unconditional guarantees provided by TIM S.p.A. for the bonds issued by Telecom Italia Finance S.A. and Telecom Italia Capital S.A..

Since the bonds were placed principally with institutional investors in major world capital markets (Euromarket and the U.S.A.), the terms which regulate the bonds are in line with *market practice* for similar transactions effected on these same markets. Consequently, they carry negative pledges, such as, for example, the commitment not to pledge the company's assets as collateral for loans.

With regard to loans taken out by TIM S.p.A. with the European Investment Bank (EIB), at December 31, 2018, the nominal amount of outstanding loans amounted to 1,350 million euros, of which 800 million euros at direct risk and 550 million euros secured.

EIB loans not secured by bank guarantees for a nominal amount equal to 800 million euros are subject to the following covenants:

- in the event the company becomes the target of a merger, demerger or contribution of a business segment outside the Group, or sells, disposes of or transfers assets or business segments (except in certain cases, expressly provided for), it shall immediately inform the EIB which shall have the right to ask for guarantees to be provided or changes to be made to the loan contract, or, only for certain loan contracts, the EIB shall have the option to demand the immediate repayment of the loan (should the merger, demerger or contribution of a business segment outside the Group compromise the Project execution or cause a prejudice to EIB in its capacity as creditor);
- with the 500 million euros loan, signed on December 14, 2015, TIM undertook to ensure that, for the entire duration of the loan, the total financial debt of the Group companies other than TIM S.p.A.—except for the cases when that debt is fully and irrevocably secured by TIM S.p.A.—is lower than 35% (thirty-five percent) of the Group's total financial debt.

EIB loans secured by banks or entities approved by the EIB for a total nominal amount of 550 million euros, and direct risk loans are subject to the following covenants:

- "Inclusion clause", under which, in the event TIM commits to uphold financial covenants in other loan contracts (and even more restrictive clauses for 2014 and 2015 direct risk loans, including, for instance, cross default clauses and commitments restricting the sale of goods) that are not present in or are stricter than those granted to the EIB, the EIB will have the right—if, in its reasonable opinion, it considers that such changes may have a negative impact on TIM's financial capacity—to request the provision of guarantees or an amendment of the loan contract in order to establish an equivalent provision in favor of the EIB;
- "Network Event", under which, in the event of the disposal of the entire fixed network or of a substantial part of it (in any case, more than half in quantitative terms) to third parties not controlled by the Company, or in the event of disposal of the controlling interest in the company in which the network or a substantial part of it has previously been transferred, TIM must immediately inform the EIB, which may then opt to demand collateral or an amendment of the loan contract or choose an alternative solution.

The loan agreements of TIM S.p.A. do not contain financial covenants *(*e.g. ratios such as Debt/EBITDA, EBITDA/ Interests, etc.) which would oblige the Company to repay the outstanding loan if the covenants are not observed.

The loan agreements contain the usual other types of *covenants*, including the commitment not to pledge the Company's *assets* as collateral for loans (*negative pledge*) and the commitment not to change the business purpose or sell the assets of the Company unless specific conditions exist (e.g. the sale takes place at *fair market value*). *Covenants* with basically the same content are also found in *export credit loan agreements*.

In the Loan Agreements and the Bonds, TIM is required to provide notification of change of control. Identification of the occurrence of a change of control and the applicable consequences—including, at the discretion of the

(1) A change of control event can result in the early repayment of the convertible bond of TIM S.p.A., as further detailed below.

investors, the establishment of guarantees or the early repayment of the amount paid in cash or as shares and the cancellation of the commitment in the absence of agreements to the contrary—are specifically covered in the individual agreements.

In addition, the outstanding loans generally contain a commitment by TIM, whose breach is an Event of Default, not to implement mergers, demergers or transfers of business, involving entities outside the Group. Such an Event of Default may entail, upon request of the Lender, the early redemption of the drawn amounts and/or the annulment of the undrawn commitment.

In the documentation of the loans granted to certain companies of the Tim Brasil group, the companies must generally respect certain financial ratios *(*e.g. capitalization ratios, ratios for servicing debt and debt ratios) as well as the usual other covenants, under pain of a request for the early repayment of the loan.

Finally, as at December 31, 2018, no *covenant*, *negative pledge* or other clause relating to the debt position, had in any way been breached or violated.

Revolving Credit Facility

The following table shows the composition and the drawdown of the committed credit lines available at December 31, 2018:

	As of December 31,			
	2018		2017	
	Agreed	Drawn down	Agreed	Drawn down
	(billions of euros)			
Revolving Credit Facility—maturing May 2019	—	—	4.00	—
Revolving Credit Facility—maturing March 2020	—	—	3.00	—
Revolving Credit-Facility—maturing January 2023	5.00	—	—	—
Total	**5.00**	**—**	**7.00**	**—**

On January 16, 2018, two syndicated Revolving Credit Facilities existing at December 31, 2017 were closed in advance and replaced by a new syndicated Revolving Credit Facility for a total of 5 billion euros, maturing on January 16, 2023, currently not drawn.

At December 31, 2018, TIM had bilateral Term Loans for 1,475 million euros and overdraft facilities for 250 million euros, drawn down for the full amount.

TIM rating at December 31, 2018

At December 31, 2018, the three rating agencies—Standard & Poor's, Moody's and Fitch Ratings—rated TIM as follows:

	Rating	Outlook
STANDARD &POOR'S	BB+	Stable
MOODY'S	Ba1	Stable
FITCH RATINGS	BBB-	Negative

Additional cash flow information required by IAS 7.

		As of December 31, 2017	Cash transactions: Receipts and/or issues	Cash transactions: Payments and/or reimbursements	Non cash transactions: Exchange rate difference	Non cash transactions: Fair value changes	Non cash transactions: Other changes	As of December 31, 2018
		(millions of euros)						
Financial payables (medium/long-term):								
Bonds		20,334	750	(1,751)	249	15	1	19,598
Convertible Bonds		1,868					31	1,899
Amounts due to banks		5,080	1,705	(2,425)	(86)		23	4,297
Other financial payables		175		(4)	9		(23)	157
	(a)	**27,457**	**2,455**	**(4,180)**	**172**	**15**	**32**	**25,951**
of which short term		*3,517*						*4,057*
Finance lease liabilities (medium/long-term)		2,430	91	(246)	(42)		(285)	1,948
	(b)	**2,430**	**91**	**(246)**	**(42)**	**—**	**(285)**	**1,948**
of which short term		*181*						*208*
Other financial liabilities (medium/long-term):								
Hedging derivatives relating to hedged items classified as non-current assets/liabilities of a financial nature		1,985			(28)	(190)	(6)	1,761
Non-hedging derivatives		9			(4)		(3)	2
Other liabilities		—						—
	(c)	**1,994**	**—**	**—**	**(32)**	**(190)**	**(9)**	**1,763**
of which short term		*75*						*338*
Financial payables (short-term):								
Amounts due to banks		901	1,793	(1,446)			—	1,248
Other financial payables		82					(20)	62
	(d)	**983**	**1,793**	**(1,446)**	**—**	**—**	**(20)**	**1,310**
Total Financial liabilities (Gross financial debt)	(e=a+b+c+d)	**32,864**	**4,339**	**(5,872)**	**98**	**(175)**	**(282)**	**30,972**
Hedging derivatives relating to hedged items classified as current and non-current assets/liabilities of a financial nature	(f)	1,755			89	(115)	3	1,732
Non hedging derivatives	(g)	22			(1)	(2)		19
Total	(h=e-f-g)	**31,087**	**4,339**	**(5,872)**	**10**	**(58)**	**(285)**	**29,221**

Additional cash flow information

The value of the paid and collected interest expense reported in the Report on Operations takes into account the movements relating to transactions in CCIRS derivatives to hedge underlying assets in both the assets component (collections) and the liabilities component (payments) without netting the positions.

	2018	2017
	(millions of euros)	
Interest expense paid	(1,978)	(2,899)
Interest income received	871	1,636
Net total	**(1,107)**	**(1,263)**

To consider the components of CCIRS derivatives as a single transaction, a representation is given with interest flows in and out shown net. This approach gives the following results:

	2018	2017
	(millions of euros)	
Interest expense paid	(1,485)	(2,304)
Interest income received	378	1,041
Net total	**(1,107)**	**(1,263)**

NOTE 17—FINANCIAL RISK MANAGEMENT

Financial risk management objectives and policies of the TIM Group

The TIM Group is exposed to the following financial risks in the ordinary course of its business operations:

- market risk: stemming from changes in interest rates and exchange rates in connection with financial assets that have been originated and financial liabilities that have been assumed;
- credit risk: representing the risk of non-fulfillment of obligations undertaken by the counterparty with regard to the liquidity investments of the Group;
- liquidity risk: connected with the need to meet short-term financial commitments.

These financial risks are managed by:

- the establishment, at central level, of guidelines for directing operations;
- the work of an internal committee that monitors the level of exposure to market risks in accordance with preestablished general objectives;
- the identification of the most suitable financial instruments, including derivatives, to reach preestablished objectives;
- the monitoring of the results achieved;
- the exclusion of the use of financial instruments for speculative purposes.

The policies for the management and the sensitivity analyses of the above financial risks by the TIM Group are described below.

Identification of risks and analysis

The TIM Group is exposed to market risks, as a result of changes in interest rates and exchange rates, in the markets in which it operates or has bond issues, mainly in Europe, the United States, Great Britain and Latin America.

The financial risk management policies of the TIM Group are directed towards diversifying market risks, hedging exchange rate risk in full and minimizing interest rate exposure by an appropriate diversification of the portfolio, which is also achieved by using carefully selected derivative financial instruments.

The Group sets an optimum composition for the fixed-rate and variable-rate debt structure and uses derivative financial instruments to achieve that set composition. In consideration of the Group's operating activities, the optimum combination of medium/long-term non-current financial liabilities has been set, on the basis of the nominal amount, in the range 65%-75% for the fixed-rate component and 25%-35% for the variable-rate component.

In managing market risk, the Group has adopted Guidelines on "Management and control of financial risk" and mainly uses the following financial derivatives:

- Interest Rate Swaps (IRS), to modify the profile of the original exposure to interest rate risks on loans and bonds, both fixed and variable;
- Cross Currency and Interest Rate Swaps (CCIRS) and Currency Forwards, to convert loans and bonds issued in currencies other than euro—principally in US dollars and British pounds—to the functional currencies of the operating companies.

Derivative financial instruments are designated as fair value hedges for managing exchange rate and interest rate risk on instruments denominated in currencies other than euro and for managing interest rate risk on fixed-rate loans. Derivative financial instruments are designated as cash flow hedges when the objective is to pre-set the exchange rate of future transactions and the interest rate.

All derivative financial instruments are entered into with banking and financial counterparties with at least a "BBB-" rating from Standard & Poor's or an equivalent rating, and an outlook that is not negative. The exposure to the various market risks can be measured by sensitivity analyses, as set forth in IFRS 7. This analysis illustrates the effects produced by a given and assumed change in the levels of the relevant variables in the various reference markets (exchange rates, interest rates and prices) on finance income and expenses and, at times, directly on equity. The sensitivity analysis was performed based on the suppositions and assumptions indicated below:

- sensitivity analyses were performed by applying reasonably likely changes in the relevant risk variables to the amounts in the consolidated financial statements at December 31, 2018;
- the changes in value of fixed-rate financial instruments, other than derivatives, produced by changes in the reference interest rates, generate an impact on profit only when, in accordance with IAS 39 and IFRS 9, they are accounted for at their fair value through profit and loss. All fixed-rate instruments, which are accounted for at amortized cost, are not subject to interest rate risk as defined by IFRS 7;
- in the case of fair value hedge relationships, fair value changes of the underlying hedged item and of the derivative instrument, due to changes in the reference interest rates, offset each other almost entirely in the income statement for the year. As a result, these financial instruments are not exposed to interest rate risk;
- the changes in value of designated financial instruments in a cash flow hedge relationship, produced by changes in interest rates, generate an impact on the debt level and on equity; accordingly, they are included in this analysis;
- the changes in value, produced by changes in the reference interest rates, of variable-rate financial instruments, other than derivatives, which are not part of a cash flow hedge relationship, generate an impact on the finance income and expenses for the year; accordingly they are included in this analysis.

Exchange rate risk—Sensitivity analysis

At December 31, 2018 (and also at December 31, 2017), the exchange rate risk of the Group's loans denominated in currencies other than the functional currency of the consolidated financial statements was hedged in full. Accordingly, a sensitivity analysis was not performed on exchange risk.

Interest rate risk—Sensitivity analysis

The change in interest rates on the variable component of payables and liquidity may lead to higher or lower finance income and expenses, while the changes in the level of the expected interest rate affect the fair value measurement of the Group's derivatives. In particular:

- with regard to derivatives that convert the liabilities contracted by the Group to fixed rates (cash flow hedging), in line with international accounting standards that regulate hedge accounting, the fair value (mark-to-market) measurement of such instruments is set aside in a specific unavailable Equity reserve. The combined change of the numerous market variables to which the mark-to-market calculation is subject between the transaction inception date and the measurement date renders any assumption about the trend of the variables of little significance. As the contract expiration date approaches, the accounting effects described will gradually be absorbed until they cease to exist;
- if at December 31, 2018 the interest rates in the various markets in which the TIM Group operates had been 100 basis points higher/lower compared to the actual rates, then higher/lower finance expenses, before the income tax effect, would have been recognized in the income statement of 63 million euros (50 million euros at December 31, 2017).

Allocation of the financial structure between fixed rate and variable rate

As for the allocation of the financial structure between the fixed-rate component and the variable-rate component, for both financial assets and liabilities, reference should be made to the following tables. They show the nominal repayment/investment amount (insofar as that amount expresses the effective interest rate exposure of the Group) and, as far as financial assets are concerned, the intrinsic nature (financial characteristics and duration) of the transactions under consideration rather than just the stated contractual terms alone. Bearing that in mind, a transaction whose characteristics (short or very short time frame and frequent renewal) are such that the interest rate is periodically reset on the basis of market parameters, even though the contract does not call for re-fixing the interest rate (such as in the case of bank deposits), has been considered in the category of variable rate.

Total financial liabilities (at the nominal repayment amount)

	As of December 31, 2018			As of December 31, 2017		
	Fixed rate	Variable rate	Total	Fixed rate	Variable rate	Total
			(millions of euros)			
Bonds	16,484	4,537	21,021	17,237	4,538	21,775
Loans and other financial liabilities(*)	2,820	3,500	6,320	3,689	3,881	7,570
Total non-current financial liabilities (including the current portion of medium/long-term financial liabilities)	**19,304**	**8,037**	**27,341**	**20,926**	**8,419**	**29,345**
Total current financial liabilities(*)	**857**	**451**	**1,308**	**282**	**700**	**982**
Total	**20,161**	**8,488**	**28,649**	**21,208**	**9,119**	**30,327**

(*) At December 31, 2017, variable-rate current liabilities included 38 million euros of payables to other lenders for installments paid in advance, which are classified in this line item even though they are not correlated to a definite rate parameter.

Total financial assets (at the nominal investment amount)

	As of December 31, 2018			As of December 31, 2017		
	Fixed rate	Variable rate	Total	Fixed rate	Variable rate	Total
			(millions of euros)			
Cash and cash equivalents	—	1,695	1,695	—	2,930	2,930
Securities	950	401	1,351	623	1,100	1,723
Other receivables	879	71	950	927	79	1,006
Total	**1,829**	**2,167**	**3,996**	**1,550**	**4,109**	**5,659**

With respect to variable-rate financial instruments, the contracts provide for revisions of the relative parameters to take place within the subsequent 12 months.

Effective interest rate

As to the effective interest rate, for the categories where that parameter can be determined, such parameter refers to the original transaction net of the effect of any derivative hedging instruments.

The disclosure, since it is provided by class of financial asset and liability, was determined, for purposes of calculating the weighted average, using the carrying amount adjusted by accruals, prepayments, deferrals and changes in fair value: this is therefore the amortized cost, net of accruals and any changes in fair value as a consequence of hedge accounting.

Total financial liabilities

	As of December 31, 2018		As of December 31, 2017	
	Adjusted carrying amount	Effective interest rate	Adjusted carrying amount	Effective interest rate
	(millions of euros)	(%)	(millions of euros)	(%)
Bonds	20,808	4.83	21,521	4.96
Loans and other financial liabilities	7,681	3.02	8,599	3.59
Total	**28,489**	**4.34**	**30,120**	**4.57**

Total financial assets

	As of December 31, 2018		As of December 31, 2017	
	Adjusted carrying amount	Effective interest rate	Adjusted carrying amount	Effective interest rate
	(millions of euros)	(%)	(millions of euros)	(%)
Cash and cash equivalents	1,695	0.12	2,930	0.05
Securities	1,351	3.13	1,723	4.07
Other receivables	182	2.96	326	2.03
Total	**3,228**	**1.54**	**4,979**	**1.57**

As for financial assets, the weighted average effective interest rate is not essentially influenced by the existence of derivatives.

As for market risk management using derivatives, reference should be made to the Note "Derivatives".

Credit risk

Exposure to credit risk for the TIM Group consists of possible losses that could arise from the failure of either commercial or financial counterparties to fulfill their assumed obligations. To measure this risk over time for impairment of financial assets (trade receivables due from customers included), the introduction of IFRS 9 required switching from the incurred loss model pursuant to IAS 39 to the expected credit loss model.

Such exposure mainly stems from general economic and financial factors, the potential occurrence of specific insolvency situations of some borrowers and other more strictly technical-commercial or administrative factors.

The TIM Group's maximum theoretical exposure to credit risk is represented by the carrying amount of the financial assets and trade receivables recorded in the financial statements.

Risk related to trade receivables is managed using customer scoring and analysis systems. For specific categories of trade receivables, the Group also makes use of factoring, mainly on a "non-recourse" basis.

Provision charges for bad debts are recorded for specific credit positions that have an element of individual risk. On credit positions that do not have such characteristics, provision charges are recorded by customer segment according to the average uncollectibility estimated on the basis of statistics. Further details are provided in the Note "Trade and miscellaneous receivables and other current assets".

Financial assets other than trade receivables are written down for impairment on the basis of a general model which estimates expected credit losses over the following 12 months, or over the residual life of the asset in the event of a substantial increase in its credit risk. The expected credit loss is calculated based on the default probability and the percentage of credit that cannot be recovered in the event of a default (the loss given default).

Moreover, as regards credit risk relating to the asset components which contribute to the determination of "Net financial debt", it should be noted that the management of the Group's liquidity is guided by conservative criteria and is principally based on the following:

- money market management: the investment of temporary excess cash resources;
- bond portfolio management: the investment of a permanent level of liquidity and the investment of that part of medium term liquidity, as well as the improvement in the average yield.

In order to limit the risk of the non-fulfillment of the obligations undertaken by the counterparty, deposits of the European companies are made with leading banking and financial institutions rated no lower than "investment grade". Investments by the companies in South America are made with leading local counterparties. Moreover, deposits are made generally for periods of less than three months. With regard to other temporary investments of liquidity, there is a bond portfolio in which the investments have a low level of risk. All investments have been carried out in compliance with the Group Guidelines on "Management and control of financial risk".

In order to minimize credit risk, the Group also pursues a diversification policy for its investments of liquidity and allocation of its credit positions among different banking counterparties. Consequently, there are no significant positions with any one single counterparty.

Liquidity risk

The Group pursues the objective of achieving an "adequate level of financial flexibility" which is expressed by maintaining a current treasury margin to cover the refinancing requirements at least for the next 12 months with irrevocable bank lines and liquidity.

18% of gross financial debt at December 31, 2018 (nominal repayment amount) will become due in the next 12 months.

Current financial assets at December 31, 2018, together with unused committed bank lines, are sufficient to fully cover the Group's financial liabilities due at least for the next 24 months.

The following tables report the contractual cash flows, not discounted to present value, relative to gross financial debt at nominal repayment amounts and the interest flows, determined using the terms and the interest and exchange rates in place at December 31, 2018. The portions of principal and interest of the hedged liabilities includes both the disbursements and the receipts of the relative hedging derivatives. Specifically, the interest portions of "Loans and other financial liabilities" also include that relating to derivatives hedging for both loans and bonds.

Financial liabilities—Maturities of contractually expected disbursements

		Maturing by December 31, of the year						
		2019	2020	2021	2022	2023	After 2023	Total
		(millions of euros)						
Bonds	Principal	2,446	1,267	564	3,087	2,419	11,238	21,021
	Interest	927	799	743	706	649	5,255	9,079
Loans and other financial liabilities (*)	Principal	1,293	384	1,343	819	331	221	4,391
	Interest	(52)	(55)	(71)	(85)	(96)	(808)	(1,167)
Finance lease liabilities	Principal	190	181	172	132	130	1,124	1,929
	Interest	135	126	116	108	100	561	1,146
Non-current financial liabilities	**Principal**	3,929	1,832	2,079	4,038	2,880	12,583	27,341
	Interest	1,010	870	788	729	653	5,008	9,058
Current financial liabilities	**Principal**	1,308	—	—	—	—	—	1,308
	Interest	3	—	—	—	—	—	3
Total financial liabilities	**Principal**	5,237	1,832	2,079	4,038	2,880	12,583	28,649
	Interest	1,013	870	788	729	653	5,008	9,061

(*) These include hedging and non-hedging derivatives.

Derivatives on financial liabilities—Contractually expected interest flows

	Maturing by December 31, of the year						
	2019	2020	2021	2022	2023	After 2023	Total
	(millions of euros)						
Disbursements	350	298	297	297	289	2,343	3,874
Receipts	(499)	(424)	(424)	(424)	(414)	(3,313)	(5,498)
Hedging derivatives—net (receipts) disbursements	**(149)**	**(126)**	**(127)**	**(127)**	**(125)**	**(970)**	**(1,624)**
Disbursements	39	27	18	16	9	23	132
Receipts	(12)	(7)	(4)	(4)	(2)	(6)	(35)
Non-hedging derivatives—net (receipts) disbursements	**27**	**20**	**14**	**12**	**7**	**17**	**97**
Total net (receipts) disbursements	**(122)**	**(106)**	**(113)**	**(115)**	**(118)**	**(953)**	**(1,527)**

Market value of derivatives

In order to determine the fair value of derivatives, the TIM Group uses various valuation models.

The mark-to-market calculation is determined by the present value discounting of the interest and notional future contractual flows using market interest rates and exchange rates.

The notional amount of IRS does not represent the amount exchanged between the parties and therefore does not constitute a measurement of credit risk exposure which, instead, is limited to the amount of the difference between the interest rates paid/received.

The market value of CCIRSs, on the other hand, also depends on the differential between the reference exchange rate at the date of signing the contract and the exchange rate at the date of measurement, since CCIRSs involve the exchange of the reference interest and principal, in the respective currencies of denomination.

The options are measured according to the Black & Scholes or Binomial models and involve the use of various measurements factors, such as: time horizon of the life of the option, risk-free rate of return, current price, volatility and any cash flows (e.g. dividend) of the underlying instrument, and exercise price.

NOTE 18—DERIVATIVES

The hedge accounting rules provided by IAS 39 continued to be applied in the first half for derivatives.

Derivative financial instruments are used by the TIM Group to hedge its exposure to foreign exchange rate risk, to manage interest rate risk and to diversify the parameters of debt so that costs and volatility can be reduced to within predetermined operational limits.

Derivative financial instruments in place at December 31, 2018 are principally used to manage debt positions. They include interest rate swaps (IRSs) to reduce interest rate exposure on fixed-rate and variable-rate bank loans and bonds, as well as cross currency and interest rate swaps (CCIRSs), currency forwards and foreign exchange options to convert the loans/receivables secured in currencies different from the functional currencies of the various Group companies.

IRS transactions, provide for or may entail, at specified maturity dates, the exchange of flows of interest, calculated on the notional amount, at the agreed fixed or variable rates.

The same also applies to CCIRS transactions which, in addition to the settlement of periodic interest flows, may provide for the exchange of principal, in the respective currencies of denomination, at maturity and possibly spot.

Hedging: economic relationship between the underlying and derivatives

Hedging relationships recorded in hedge accounting at 12/31/2018 belong to two categories: i) hedging of the fair value of bond issues denominated in euros and ii) hedging of cash flows from coupon flows of bond issues denominated in currencies other than the euro.

In the first case, the hedged risk is represented by the fair value of the bond attributable to euro interest rates and is hedged by IRS. The present value of both instruments, the underlying and derivatives, depends on the structure of interest rates on the euro market, used to calculate the discount factor and variable interest flows of the derivative. In particular, oscillating rates will translate as changes in the discount factor of the fixed interest expense on the underlying; on the derivative, changes in the discount factor of interest income will occur, as well as changes in the nominal flow of variable interest (only partially corrected by the discounting effect). The effects on the derivative will be opposite, in accounting terms, to the effects on the underlying.

In the second case, the hedged risk is represented by the variability in cash flows (and the repayment of the nominal amount) generated by exchange rates; hedging comprises combinations of IRS and CCIRS that synthetically transform fixed rate coupon flows into currency into fixed rate flows in euro. In this case, exchange rate oscillations will usually produce contrary effects on the underlying and on the derivative as the asset leg of the latter faithfully reflects the underlying, while the liability leg is denominated in euros and is therefore insensitive to the exchange rate.

Hedging: determination of the hedge ratio

The types of hedging adopted by the Group require a hedge ratio equal to 1:1, as the types of risk hedged (interest rate and exchange risks) are such as to generate economic effects on the underlying instruments that can only be offset by the same notional quantities of derivative instruments.

Hedging: potential sources of ineffectiveness

The contractualization of derivatives to hedge financial risks takes place at arm's length and aims to fully neutralize the effects of such risks.

However, in practice, both fair value hedges and cash flows hedges, although financially perfect, cannot guarantee absolute effectiveness due to the many banks involved, the particular nature of some derivatives attributable to fixing and/or the indexing of variable parameters, and the possible imperfect correspondence of critical terms.

The following table indicates total financial derivatives of the TIM Group at December 31, 2018 and in 2017; in compliance with the requirements of IFRS 7, a move has been made from the representation of the synthetic notional value of the hedge to the current representation, where the notional amounts are shown in relation to all derivative instruments involved in hedging.

The following tables break down the financial derivatives by type of risk for each kind of hedging, separating financial assets and liabilities. For CCIRS, the notional amount refers to the contractual value in euros, for IRS in a currency other than the euro, the value is indicated at the market exchange rate.

Type	Hedged Risk	Notional amount at 12/31/2018	Notional amount at 12/31/2017	Spot (*) Mark-to-Market (Clean Price) at 12/31/2018	Spot (*) Mark-to-Market (Clean Price) at 12/31/2017
		(millions of euros)			
Interest rate swaps	Interest rate risk	4,334	4,334	52	2
Cross Currency and Interest Rate Swaps	Interest rate risk and currency exchange rate risk	—	—	—	—
Total Fair Value Hedge Derivatives		**4,334**	**4,334**	**52**	**2**
Interest rate swaps	Interest rate risk	4,992	5,178	182	346
Cross Currency and Interest Rate Swaps	Interest rate risk and currency exchange rate risk	6,804	7,239	(365)	(672)
Total Cash Flow Hedge Derivatives		**11,796**	**12,417**	**(183)**	**(325)**
Total Non-Hedge Accounting Derivatives		**223**	**213**	**17**	**15**
Total TIM Group Derivatives		**16,353**	**16,964**	**(114)**	**(308)**

(*) Spot Mark-to-market above represents the market measurement of the derivative net of the accrued portion of the flow in progress.

Fair value hedges	Accounting item		Nominal value	Carrying amount	Change in fair value for the year
			(millions of euro)		
Interest rate swaps	Hedging derivatives relating to hedged items classified as current (non-current) assets/liabilities of a financial nature—Current / non-current assets.	(a)	**4,334**	**52**	**50**
Assets				52	
Liabilities				—	—
Cross Currency and Interest Rate Swaps	Hedging derivatives relating to hedged items classified as current (non-current) assets/liabilities of a financial nature—Current / non-current assets.	(b)	—	—	—
Assets				—	—
Liabilities				—	—
Derivatives (spot value)		(a+b)	**4,334**	**52**	**50**
Accruals				21	
Derivatives (gross value)				**73**	
Underlying instruments (1)	Bonds—Current / non-current liabilities		**4,334**	(4,368)	
of which the fair value adjustment	Fair value adjustment and measurements at amortized cost	(c)		(58)	(53)
Ineffectiveness		**(a+b+c)**			**(3)**
Fair value adjustment for hedging settled in advance (2)				**(157)**	

(1) Includes the amortized cost value of bonds currently hedged plus the fair value adjustment.

(2) Referred to bonds no longer hedged, which are therefore not presented in the table.

Cash flow hedges	Accounting item		Nominal value	Carrying amount	Change in fair value for the year	Change in cumulative fair value
			(millions of euro)			
Interest rate swaps	Hedging derivatives relating to hedged items classified as current (non-current) assets/liabilities of a financial nature—Current / non-current assets.	(a)	**4,992**	**182**	**(165)**	
Assets				923	(180)	
Liabilities				(741)	15	
Cross Currency and Interest Rate Swaps	Hedging derivatives relating to hedged items classified as current (non-current) assets/liabilities of a financial nature—Current / non-current assets.	(b)	**6,804**	**(365)**	**307**	
Assets				590	122	
Liabilities				(955)	185	
Derivatives (spot value)		(a+b)	**11,796**	**(183)**	**142**	
Accruals				81		
Derivatives (gross value)				**(102)**		
of which equity reserve gains and losses					20	

Cash flow hedges	Accounting item	Nominal value	Carrying amount	Change in fair value for the year	Change in cumulative fair value
		(millions of euro)			
Determination of ineffectiveness					
Change in derivatives		(c)			28
Change in underlying instruments (3)		(d)			(18)
Ineffectiveness (4)	Positive fair value adjustment of financial derivatives—non-hedging	(c+d)			10
Equity reserve					
Equity reserve balance			(720)		
of which due to the fair value of hedging settled in advance			(6)		
Reclassification to P&L	Negative reversal of the reserve for the fair value adjustment of hedging derivatives (cash flow hedges)			(2)	

(3) Hypothetical derivatives used in measuring the effectiveness of cash flow hedges.

(4) The ineffectiveness, due to its nature and calculation, does not necessarily coincide with the difference in cumulative changes in the fair value of derivatives and the underlying; the effect due to the adoption of CVA/DVA is not considered.

The change in the equity reserve attributable to the effective hedging component is equal to 26 million euros and comprises:

Changes in the equity cash flow hedge reserve	As of December 31, 2017	Change				As of December 31, 2018
		Hedging instrument gains / losses	Reversal from reclassification	Reversal for the fair value adjustment of hedging settled in advance	Other	
	(millions of euros)					
	(746)					(720)
Change in the effective fair value of derivatives		20				
Change in the CVA/DVA		8				
Reversal for ineffectiveness 2017			(5)			
Amortization in P&L of the fair value of hedging settled in advance				2		
Other					1	
Overall change						**26**

None of the parameters represented includes any income tax effect.

The transactions hedged by cash flow hedges will generate cash flows and produce economic effects in the income statement in the periods indicated in the following table:

Currency of denomination	Notional amount in currency of denomination (millions)	Start of period	End of period	Rate applied	Interest period	Notional in euro hedging (millions)	Rate in euro hedging
GBP	850	Jan-19	Jun-19	6.375%	Annually	1,214	5.311%
GBP	375	Jan-19	May-23	5.875%	Annually	552	5.535%
JPY*	20,000	Jan-19	Oct-29	5.000%	Semiannually	174	5.940%
JPY**	20,000	Jan-19	Oct-29	0.750%	Semiannually	138	0.696%
USD	1,000	Jan-19	Nov-33	6.375%	Semiannually	849	5.994%
USD	1,500	Jan-19	May-24	5.303%	Semiannually	1,099	4.226%
USD	760	Jan-19	Jun-19	7.175%	Semiannually	549	6.689%
USD	1,000	Jan-19	Sept-34	6.000%	Semiannually	794	4.332%
USD	1,000	Jan-19	July-36	7.200%	Semiannually	791	5.884%
USD	1,000	Jan-19	Jun-38	7.721%	Semiannually	645	7.470%

* Coupon-bearing bond flows are denominated in USD and calculated on a notional of 187.6 million USD.

** Only hedging of coupon-bearing bond flow as a result of step-up on the loan.

The method selected to test the effectiveness retrospectively and, whenever the principal terms do not fully coincide, prospectively, for cash flow hedge derivatives and fair value hedge derivatives is the Volatility Risk Reduction (VRR) Test. This test assesses the ratio between the portfolio risk (where the portfolio means the derivative and the item hedged) and the risk of the hedged item taken separately. In essence, the portfolio risk must be significantly less than the risk of the hedged item.

NOTE 19—SUPPLEMENTARY DISCLOSURES ON FINANCIAL INSTRUMENTS

Measurement at fair value

For the purposes of the comparative information between the carrying amounts and the fair value of financial instruments, required by IFRS 7, the majority of the non-current financial liabilities of the TIM Group consist of bonds, whose fair value is directly observable in the financial markets, as they are financial instruments that, due to their size and diffusion among investors, are commonly traded on the relevant markets (see the Note "Financial Liabilities (non-current and current)"). For other types of financing, however, the following assumptions have been made in determining fair value:

- for variable-rate loans: the nominal repayment amount has been assumed;
- for fixed-rate loans: fair value has been assumed to be the present value of future cash flows using market interest rates at December 31, 2018;
- for some types of loans granted by government institutions for social development purposes, for which fair value cannot be reliably calculated, the carrying amount has been used.

Lastly, for the majority of financial assets, their carrying amount constitutes a reasonable approximation of their *fair value* since these are short-term investments that are readily convertible into cash.

The fair value measurement of the financial instruments of the Group is classified according to the three levels set out in IFRS 7. In particular, the *fair value* hierarchy introduces the following levels of input:

- Level 1: quoted prices in active market;
- Level 2: prices calculated using observable market inputs;
- Level 3: prices calculated using inputs that are not based on observable market data.

Supplementary disclosure on financial instruments required by IFRS 7 and the schedules of gains and losses are provided in the tables below. In particular:

- the assets and liabilities at December 31, 2018 are presented based on the categories established by IFRS 9 (adopted commencing on January 1, 2018);
- classification of the financial assets and liabilities is presented at the date of first application of IFRS 9 (January 1, 2018);
- the assets and liabilities at December 31, 2017 are presented based on the categories established in IAS 39.

Key for IFRS 9 categories	Acronym
Financial assets measured at:	
Amortized Cost	AC
Fair Value Through Other Comprehensive Income	FVTOCI
Fair Value Through Profit or Loss	FVTPL
Financial liabilities measured at:	
Amortized Cost	AC
Fair Value Through Profit or Loss	FVTPL
Hedging Derivatives	HD
Not applicable	n.a.

Key for IAS 39 categories	Acronym
Loans and Receivables	LaR
Financial assets Held-to-Maturity	HtM
Available-for-Sale Financial assets	AfS
Financial Assets/Liabilities Held for Trading	FAHfT/FLHfT
Financial Liabilities at Amortized Cost	FLAC
Hedging Derivatives	HD
Not applicable	n.a.

Carrying amount and fair value hierarchy for each category/class of financial asset/liability and comparison with their fair value at December 31, 2018

	IFRS 9 categories	Note	Carrying amounts in financial statements at 12/31/2018	Amounts recognized in the financial statements: Amortized cost	Amounts recognized in the financial statements: Fair value recognized in the comprehensive income statement	Amounts recognized in the financial statements: Fair value recognized in the income statement	Levels of hierarchy or of fair value: Level 1	Level 2	Level 3	Amounts recognized in financial statements according to IAS 17	Fair Value at 12/31/2018
						(millions of euros)					
Assets											
Financial assets measured at ammortized cost	**AC**		**5,800**	**5,800**	**—**	**—**					**5,800**
Non-current assets											
Receivables from employees		9	43	43							
Other financial receivables		9	—	—							
Miscellaneous receivables (non-current)		10	326	326							
Current Assets											
Receivables from employees		9	14	14							
Other short-term financial receivables		9	2	2							
Cash and cash equivalents		9	1,917	1,917							
Trade receivables		13	3,327	3,327							
Other receivables (current)		13	125	125							
Contract Assets			**46**	**46**							
Financial assets measured at fair value through other comprehensive income	**FTVOCI**		**994**	**—**	**994**	**—**					**994**
Non-current assets											
Other investments		9	49		49		3	16	30		
Securities other than investments			—		—		—				
Current Assets		9									
Trade receivables					—						
Securities other than investments			945		945		945				
Financial assets measured at fair value through profit or loss	**FVTPL**	9	**200**	**—**	**—**	**200**					**200**
Non-current assets											
Non-hedging derivatives		9	*7*			*7*		*7*	—		
Current Assets											
Securities other than investments:			181			181	181				
Non-hedging derivatives			12			12		12			
Hedging derivatives	**HD**	9	*1,732*	—	*1,659*	*73*					1,732
Non-current assets											
Hedging derivatives		9	1,490		1,438	52		1,490	—		
Current Assets											
Hedging derivatives		9	242		221	21		242	—		
Financial receivables for lease contracts	**n.a.**	9	**124**							**124**	**124**
Non-current assets		8	*54*							*54*	
Current Assets			*70*							*70*	
Total			**8,850**	**5,800**	**2,653**	**273**	**1,129**	**1,767**	**30**	**124**	**8,850**

The financial instruments belonging to hierarchy level 3 of fair value are represented by the following Other investments recognized as Non-current assets, for which directly or indirectly observable prices on the market are not available:

- Northgate CommsTech Innovations Partners L.P.
- Banca UBAE
- Istituto Europeo di Oncologia
- Other minor companies.

Northgate CommsTech Innovations Partners L.P. was measured based on the latest available Net Asset Value reported by the fund manager.

Banca UBAE, Istituto Europeo di Oncologia and the other minor companies were measured on the basis of an analysis, deemed reliable, of the financial elements recognized.

The profit/(loss) recognized in Other components of the Consolidated Statements of Comprehensive Income were recognized within the scope of the Reserve for financial assets measured at fair value through other comprehensive income.

	IFRS 9 categories	Note	Carrying amounts in financial statements at 12/31/2018	Amounts recognized in the financial statements: Amortized cost	Amounts recognized in the financial statements: Fair value recognized in the comprehensive income statement	Amounts recognized in the financial statements: Fair value recognized in the income statement	Levels of hierarchy or of fair value: Level 1	Levels of hierarchy or of fair value: Level 2	Amounts recognized in financial statements according to IAS 17	Fair Value at 12/31/2018
						(millions of euros)				
Liabilities										
Financial liabilities measured at ammortized cost	**AC/HD**		**32,064**	**32,064**						**32,123**
Non-current liabilities										
Financial payables		16	21,894	21,894						—
Current liabilities										
Financial payables		16	5,367	5,367						—
Trade and miscellaneous payables and other current liabilities		23	4,610	4,610						
Contract Liabilities			**193**	**193**						
Financial liabilities measured at fair value through profit or loss	**FVTPL**		**2**			**2**				**2**
Non-current liabilities										
Non-hedging derivatives			2			2		2		
Current liabilities										
Non-hedging derivatives			—			—		—		
Hedging derivatives	**HD**		**1,761**		**1,761**	**—**				**1,761**
Non-current liabilities										
Hedging derivatives		16	1,423		1,423	—		1,423		
Current liabilities										
Hedging derivatives		16	338		338	—		338		
Finance lease liabilities	**n.a.**		**1,948**						**1,948**	**3,359**
Non-current liabilities		16	1,740						1,740	
Current liabilities		16	208						208	
Total			**35,775**	**32,064**	**1,761**	**2**	**—**	**1,763**	**1,948**	**37,245**

Classification of financial assets and liabilities at the date of first application of IFRS 9 (1/1/2018)(*)

The following tables state the financial assets and liabilities at 1/1/2018 broken down by:

- new category determined in compliance with IFRS 9.
- original category determined in compliance with IAS 39;

	IFRS 9 categories	Note	Carrying amounts in financial statements at 01/01/2018 according to the new IFRS 9 categories (*)	IAS 39 categories	Carrying amounts in financial statements at 12/31/2017 according to the original IAS 39 categories
			(millions of euros)		
Assets					
Financial assets measured at ammortized cost	AC		7,802	LaR	7,914
Non-current assets					
Receivables from employees		9	47		47
Other financial receivables		9	150		150
Miscellaneous receivables (non-current)		10	371		371
Current Assets					
Receivables from employees		9	16		16
Other short-term financial receivables		9	101		101
Cash and cash equivalents		9	3,575		3,575
Trade receivables		13	3,353		3,500
Other receivables (current)		13	154		154
Contract Assets		13	35		—
Financial assets measured at fair value through other comprehensive income	FVTOCI		1,044	AfS	1,044
Non-current assets					
Other investments		8	51		51
Securities other than investments		9	—		—
Current Assets					
Trade receivables		13	—		—
Securities other than investments		9	993		993
Financial assets measured at fair value through profit or loss	FVTPL		22	FAHfT	22
Non-current assets					
Non-hedging derivatives		9	7		7
Current Assets					
Securities other than investments		9	—		—
Non-hedging derivatives		9	15		15
Hedging derivatives	HD		1,755	HD	1,755
Non-current assets					
Hedging derivatives		9	1,495		1,495
Current Assets					
Hedging derivatives		9	260		260
Financial receivables for lease contracts	n.a.		114	n.a.	114
Non-current assets		9	69		69
Current Assets		9	45		45
Total			10,737		10,849

(*) For additional details, please refer to what is explained in the Note "Accounting standards" and in the respective notes.

	IFRS 9 categories	Note	Carrying amounts in financial statements at 01/01/2018 according to the new IFRS 9 categories (*)	IAS 39 categories	Carrying amounts in financial statements at 12/31/2017 according to the original IAS 39 categories
			(millions of euros)		
Liabilities					
Financial liabilities measured at ammortized cost	AC/HD		33,389	FLAC/HD	33,355
Non-current liabilities					
Financial payables		16	23,940		23,940
Current liabilities					
Financial payables		16	4,500		4,500
Trade and miscellaneous payables and other current liabilities			4,915		4,915
Contract Liabilities		22	34		—
Financial liabilities measured at fair value through profit or loss	FVTPL	22	9	FLHfT	9
Non-current liabilities					
Non-hedging derivatives		16	5		5
Current liabilities					
Non-hedging derivatives		16	4		4
Hedging derivatives	HD		1,985		1,985
Non-current liabilities					
Hedging derivatives		16	1,914		1,914
Current liabilities					
Hedging derivatives		16	71		71
Finance lease liabilities	n.a.		2,430		2,430
Non-current liabilities			2,249		2,249
Current liabilities			181		181
Total			37,813		37,779

(*) For additional details, please refer to what is explained in the Note "Accounting standards" and in the respective notes.

Carrying amount and fair value hierarchy for each category/class of financial asset/liability and comparison with their fair value at December 31, 2017

	IAS 39 categories	Note	Carrying amounts in financial statements at 12/31/2017	Amounts recognized in the financial statements according to IAS 39: Amortized cost	Cost	Fair value taken to equity	Fair value recognized in the income statement	Levels of hierarchy or of fair value: Level 1	Level 2	Amounts recognized in financial statements according to IAS 17	Fair Value at 12/31/2017
				(millions of euros)							
Assets											
Loans and receivables	**LaR**		**7,914**	**7,913**	**1**						**7,914**
Non-current assets											
Receivables from employees		9	47	47							
Other financial receivables		9	150	150							
Miscellaneous receivables (non-current)		10	371	370	1						
Current Assets											
Receivables from employees		9	16	16							
Other short-term financial receivables		9	101	101							
Cash and cash equivalents		9	3,575	3,575							
Trade receivables		13	3,500	3,500							
Other receivables (current)		13	154	154							
Available-for-sale financial assets	**Afs**		**1,044**		**28**	**1,016**					**1,044**
Non-current assets											
Other investments		8	51		28	23		3	20		
Securities other than investments		9	—			—		—			
Current Assets											
Securities other than investments available for sale		9	993			993		993			
Financial assets at fair value through profit or loss held for trading	**FAHfT**		**22**				**22**				**22**
Non-current assets											
Non-hedging derivatives		9	7				7		7		
Current Assets											
Non-hedging derivatives		9	15				15		15		
Securities other than investments: held for trading			—				—	—			
Hedging derivatives	**HD**		**1,755**			**1,713**	**42**				**1,755**
Non-current assets											
Hedging derivatives		9	1,495			1,474	21		1,495		
Current Assets											
Hedging derivatives		9	260			239	21		260		
Financial receivables for lease contracts	**n.a.**		**114**							**114**	**114**
Non-current assets		9	69							69	
Current Assets		9	45							45	
Total			**10,849**	**7,913**	**29**	**2,729**	**64**	**996**	**1,797**	**114**	**10,849**

	ifrs 9 categories	Note	Carrying amounts in financial statements at 12/31/2017	Amounts recognized in the financial statements according to IAS 39: Amortized cost	Cost	Fair value taken to equity	Fair value recognized in the income statement	Levels of hierarchy or of fair value: Level 1	Level 2	Amounts recognized in financial statements according to IAS 17	Fair Value at 12/31/2017
			(millions of euros)								
Liabilities											
Financial liabilities at amortized cost	**FLAC/HD**		**33,355**	**33,355**							**36,023**
Non-current liabilities											
Financial payables		16	23,940	23,940							—
Current liabilities											
Financial payables		16	4,500	4,500							—
Trade and miscellaneous payables and other current liabilities		22	4,915	4,915							
Financial liabilities at fair value through profit or loss held for trading	**FLHfT**		**9**				**9**				**9**
Non-current liabilities											
Non-hedging derivatives		16	5				5		5		
Current liabilities											
Non-hedging derivatives		16	4				4		4		
Hedging derivatives	**HD**		**1,985**			**1,966**	**19**				**1,985**
Non-current liabilities											
Hedging derivatives		16	1,914			1,895	19		1,914		
Current liabilities											
Hedging derivatives		16	71			71	—		71		
Finance lease liabilities	**n.a.**		**2,430**							**2,430**	**3,604**
Non-current liabilities		16	2,249							2,249	
Current liabilities		16	181							181	
Total			**37,779**	**33,355**	**—**	**1,966**	**28**	**—**	**1,994**	**2,430**	**41,621**

Gains and losses by IFRS 9 category—Year 2018

	IFRS 9 categories	Net gains/ (losses) 2018 (1)	*of which interest*
		(millions of euros)	
Assets measured at amortized cost	AC	(540)	*40*
Assets and liabilities measured at fair value through profit or loss	FVTPL	25	
Assets measured at fair value recognized in the statements of comprehensive income	FVTOCI	*7*	
Liabilities measured at amortized cost	AC	(1,160)	*1,178*
Total		**(1,668)**	**1,218**

(1) Of which 2 million euros relates to fees and expenses not included in the effective interest rate calculation on financial assets/liabilities other than those at fair value through profit or loss.

Gains and losses by IAS 39 category—Year 2017

	IAS 39 Categories	Net gains/(losses) 2017 (1)	*of which interest*
		(millions of euros)	
Loans and Receivables	LaR	(356)	*118*
Available-for-Sale financial assets	AfS	8	
Financial Assets/Liabilities Held for Trading	FAHfT/FLHfT	(19)	
Financial Liabilities at Amortized Cost	FLAC	(1,338)	*1,376*
Total		**(1,705)**	***1,494***

(1) Of which, 2 million euros relates to fees and expenses not included in the effective interest rate calculation on financial assets/liabilities other than those at fair value through profit or loss.

NOTE 20—EMPLOYEE BENEFITS

Employee benefits decreased by 214 million euros compared to December 31, 2017 and are summarized as follows:

		As of December 31, 2016	Increases/ Present value	Decrease	Exchange differences and other changes	As of December 31, 2017
				(millions of euros)		
Provision for employee severance indemnities	**(A)**	**1,009**		**(51)**		**958**
Provision for pension plans and other		28	(2)	(1)	(3)	22
Provision for termination benefit incentives and Corporate restructuring expenses		348	689	(177)	(7)	853
Total other provisions for employee benefits	**(B)**	**376**	**687**	**(178)**	**(10)**	**875**
Total	**(A+B)**	**1,385**	**687**	**(229)**	**(10)**	**1,833**
Of which:						
Non-current portion		*1,355*				*1,736*
Current portion (*)		*30*				*97*

(*) The current portion refers only to Other provisions for employee benefits.

		As of December 31, 2017	Increases/ Present value	Decrease	Exchange differences and other changes	As of December 31, 2018
				(millions of euros)		
Provision for employee severance indemnities	**(A)**	**958**	**(8)**	**(63)**	**—**	**887**
Provision for pension plans and other		22	3	(3)		22
Provision for termination benefit incentives and Corporate restructuring expenses		853	205	(348)		710
Total other provisions for employee benefits	**(B)**	**875**	**208**	**(351)**	**—**	**732**
Total	**(A+B)**	**1,833**	**200**	**(414)**	**—**	**1,619**
Of which:						
Non-current portion		*1,736*				*1,567*
Current portion (*)		*97*				*52*

(*) The current portion refers only to Other provisions for employee benefits.

The Provision for employee severance indemnities only refers to Italian companies and decreased overall by 71 million euros. The reduction of 63 million euros under "Decreases" refers to ordinary advances and uses paid during the year to employees who terminated employment. The lower cost of the item "increases/discounting" mainly includes the following:

	Year ended December 31,		
	2018	2017	2016
		(millions of euros)	
(Positive)/negative effect of curtailment	—	(6)	—
Current service cost (*)	—	—	—
Finance expenses	13	14	16
Net actuarial (gains) losses for the year	(23)	(8)	33
Total	**(10)**	**—**	**49**
Effective return on plan assets	**there are no assets servicing the plan**		

(*) The portions intended for the INPS Treasury Fund or for the supplementary pension funds have been recorded under "Employee benefits expenses" and "Social security expenses". The latter account is used only for the severance indemnity expenses of companies with less than 50 employees.

Net actuarial gains at December 31, 2018 amounted to 23 million euros (net actuarial gains of 8 million euros in 2017). They are basically associated with the balance of the change in the discount rate, which was 1.57% as compared to the 1.30% used at December 31, 2017, and with the turn-over effect related to the company restructuring plans already started in the previous year. The inflation rate was 1.50%, unchanged compared to 2017.

According to national law, the amount of provision for employee severance indemnities to which each employee is entitled depends on the period of service and must be paid when the employee leaves the company. The amount of severance indemnity due upon termination of employment is calculated on the basis of the period of employment and the taxable compensation of each employee. This liability is adjusted annually based on the official cost-of-living index and legally-set interest. The liability is not associated with any vesting condition or period or any funding obligation; accordingly, there are no assets servicing the provision. The liability is recognized net of the partial prepayments of the fund and the payments of the amounts obtained by employees for the reasons permitted by the applicable regulations.

Under the regulations introduced by Italian Legislative Decree 252/2005 and Law no. 296/2006 with which, for companies with at least 50 employees, the severance indemnities accruing from 2007 are assigned, as elected by the employees, to either the INPS Treasury Fund or to supplementary pension funds and take the form of a "defined contribution plan".

However, for all companies, the revaluations of the amounts in the provision for employee severance indemnities existing at the election date, and also the amounts accrued and not assigned to supplementary pension plans for companies with less than 50 employees, are retained in the provision for employee severance indemnities. In accordance with IAS 19, the provision has been recognized as a "defined benefit plan".

In application of IAS 19, the employee severance indemnities have been calculated using the "Projected Unit Credit Method" as follows:

- the future possible benefits which could be paid to each employee registered in the program in the event of retirement, death, disability, resignation etc. have been projected on the basis of a series of financial assumptions (cost-of-living increases, interest rate, increase in compensation etc.). The estimate of future benefits includes any increases for additional service seniority, as well as the estimated increase in the compensation level at the measurement date—only for employees of companies with less than 50 employees during the year 2006;
- the average present value of future benefits has been calculated, at the measurement date, on the basis of the annual interest rate adopted and the probability that each benefit actually has to be paid;

- the liability of each company concerned has been calculated as the average present value of future benefits that will be generated by the existing provision at the measurement date, without considering any future accruals (for companies with at least 50 employees during the year 2006) or by identifying the amount of the average present value of future benefits which refer to the past service already accrued by the employee in the company at the measurement date (for the others), i.e. adopting the "service pro-rate".

The following assumptions have been made:

FINANCIAL ASSUMPTIONS	Executives	Non-executives
Inflation rate	**1.50% per annum**	**1.50% per annum**
Discount rate	**1.57% per annum**	**1.57% per annum**
Employee severance indemnities annual increase rate	**2.625% per annum**	**2.625% per annum**
Annual real wage growth:		
equal to or less than 40 years of age	1.0% per annum	1.0% per annum
over 40 but equal to or less than 55 years of age	0.5% per annum	0.5% per annum
over 55 years of age	0.0% per annum	0.0% per annum

DEMOGRAPHIC ASSUMPTIONS	Executives	Non-executives
Probability of death	RG 48 mortality tables published by "Ragioneria Generale dello Stato"	RG 48 mortality tables published by "Ragioneria Generale dello Stato"
Probability of disability	INPS tables divided by age and sex	INPS tables divided by age and sex
Probability of resignation:		
up to 40 years of age	6.50%	1.00%
From 41 to 50 years of age	2.00%	0.50%
From 51 to 59 years of age	2.00%	0.50%
From 60 to 64 years of age	20.00%	6.50%
Over 65 years of age	None	None
Probability of retirement	Reaching the minimum requisites established by the Obligatory General Insurance updated on the basis of Italian Law 214 of December 22, 2011	
Probability of receiving at the beginning of the year an advance from the provision for severance indemnities accrued equal to 70%	1.5% per annum	1.5% per annum

The adoption of the above assumptions resulted in a liability for employee severance indemnities at December 31, 2018 of 887 million euros (958 million euros at the end of 2017).

Reported below is a sensitivity analysis for each significant actuarial assumption adopted to calculate the liability as at year end, showing how the liability would have been affected by changes in the relevant actuarial assumption that were reasonably possible at that date, stated in amounts.

The weighted average duration of the obligation is 11.9 years.

CHANGES IN ASSUMPTIONS	Amounts (millions of euros)
Turnover rate:	
+0.25 p.p.	(2)
- 0.25 p.p.	2
Annual inflation rate:	
+0.25 p.p.	19
- 0.25 p.p.	(18)
Annual discount rate:	
+0.25 p.p.	(25)
- 0.25 p.p.	26

The Provision for pension and other plans amounted to 22 million euros at December 31, 2018 (22 million euros at December 31, 2017) and mainly represented pension plans in place at foreign companies of the Group.

The provision for termination benefit incentives and corporate restructuring showed a drop of 143 million euros mainly as the balance between the drawdowns (348 million euros) for personnel leaving the Group resulting from the staff leaving incentive plans already allocated in previous years and adjustment of the provision (204 million euros); Specifically, a plan was launched at the end of 2017 for executive and non-executive staff to adopt, among others, Article 4(1–7-ter) of Law 92 of June 28, 2012 (the "Fornero Law", which provides for early retirement arrangements). During 2018, Plan take-up was greater than initially forecast, therefore estimates for staff leaving in 2019-2020 were revised, also taking into account the social security changes made by Decree Law 4 January 28, 2019.

NOTE 21—PROVISIONS

Provisions increased by 103 million euros compared to December 31, 2017. The figure breaks down as follows:

	As of December 31, 2017	Increase	Used through income statement	Used directly	Exchange differences and other changes	As of December 31, 2018
			(millions of euros)			
Provision for taxation and tax risks	93	30	—	(21)	2	104
Provision for restoration costs	350	10	—	(13)	1	348
Provision for legal disputes	605	244	—	(134)	(6)	709
Provision for commercial risks	28	18	—	(12)	(1)	33
Provision for risks and charges on investments and corporate-related transactions	32	—	(5)	(6)	—	21
Other provisions	9	3	(4)	(8)	5	5
Total	**1,117**	**305**	**(9)**	**(194)**	**1**	**1,220**
Of which:						
Non-current portion	*825*					876
Current portion	292					*344*

The non-current portion of provisions for risks and charges mainly related to the provision for restoration costs and some of the provision for legal disputes. More specifically, in accordance with accounting policies, the total amount of the provision for restoration costs is calculated by re-measuring the amounts for which a probable outlay is envisaged, based on the estimated inflation rates for the individual due dates, and subsequently discounted to the reporting date based on the average cost of debt, taking into account cash outflow forecasts.

The provision for taxation and tax risks rose by 11 million euros compared to December 31, 2017. The end of year balance reflects provisions and uses mainly carried out by the Brazil Business Unit and the Domestic Business Unit.

The provision for restoration costs related to the provision for restoration of leased real estate and sites used for mobile telephony and the dismantling of tangible assets (specifically: batteries and wooden poles) of the companies of the Domestic Business Unit (341 million euros) and of the Brazil Business Unit (7 million euros).

The provision for legal disputes included the provision for litigation with employees, social security entities, regulatory authorities and other counterparties.

The balance of the provision at December 31, 2018 is attributable for 578 million euros to the Domestic Business Unit, including the provision associated with the sanction connected with the Golden Power case, and the Brazil Business Unit (131 million euros). Draw downs mainly related to the Brazil Business Unit (86 million euros) and the Domestic Business Unit (48 million euros) and were essentially related to settlement agreements reached.

The provision for commercial risks, basically unchanged compared to the previous year, relates to the Domestic Business Unit.

The provision for risks and charges on investments and corporate-related transactions, decreased by 11 million euros, following use by the Parent TIM S.p.A..

Other provisions showed no significant changes compared to December 31, 2017 and mainly refer to companies belonging to the Domestic Business Unit.

NOTE 22—MISCELLANEOUS PAYABLES AND OTHER NON—CURRENT LIABILITIES

Miscellaneous payables and other non-current liabilities rose by 1,619 million euros compared to December 31, 2017. The figure breaks down as follows:

		As of December 31,	
		2018	2017
		(millions of euros)	
Miscellaneous payables (non-current)			
Payables to social security agencies		275	238
Income tax payables (*)		42	45
Other liabilities		1,919	16
	(a)	**2,236**	**299**
Other non current liabilities			
Deferred revenues from contract with customers (Contract liabilities)		109	
Other deferred revenue and income		595	
Capital grants		357	391
Deferred income			988
	(b)	**1,061**	**1,379**
Miscellaneous payables and other non-current liabilities	**(a+b)**	**3,297**	**1,678**

(*) Analyzed in the Note "Income tax expense".

The impact caused by the adoption of IFRS 15 are summarized as below:

	As of December 31, 2017	New IFRS Adoption		As of January 1, 2018
		IFRS 15 reclassifications	IFRS 15 adjustments	
	(millions of euros)			
Miscellaneous payables (non-current)				
Payables to social security agencies	238	—	—	238
Income tax payables (*)	45	—	—	45
Other liabilities	16	—	—	16
	299	**—**	**—**	**299**
Other non current liabilities				
Deferred revenues from contract with customers (Contract liabilities)	—	350	(251)	99
Other deferred revenue and income	—	638		638
Capital grants	391	—		391
Deferred income	988	(988)	—	—
	1,379	**—**	**(251)**	**1,128**
Miscellaneous payables and other non-current liabilities	**1,678**	**—**	**(251)**	**1,427**

For more detailed information on the impacts caused by the adoption of IFRS 15, please refer to the Note "Accounting Standards".

Miscellaneous payables (non-current) included:

- **payables to social security agencies** equal to 275 million euros and mainly related to the remaining amount due to the INPS for the application of the 2015 arrangements relating to Article 4 paragraphs 1-7ter, of Italian Law 92 of June 28, 2012, the "Fornero Law" (see the Note "Employee benefits expenses" for more details).

Details are as follows:

	As of December 31,	
	2018	2017
	(millions of euros)	
Non-current payables:		
Due from 2 to 5 years after the end of the reporting period	259	226
Due beyond 5 years after the end of the reporting period	16	12
	275	**238**
Current payables	**173**	**58**
Total	**448**	**296**

- **other payables** equal to 1,919 million euros at December 31, 2018. rose by 1,903 million euros compared to December 31, 2017, driven by the investment for the total amount of 1,922 million euros (net of payment of the first installment for 477 million euros at the end of October 2018) in the acquisition of user rights to frequencies in the 694–790 MHz, 3600–3800 MHz, and 26.5–27.5 GHz bands, which will be reserved for 5G mobile telecommunications services in Italy, awarded to TIM S.p.A. at auction in 2018 by the Ministry of Economic Development. The residual debt was recognized at nominal value for 1,903 million euros under the item non-current miscellaneous payables and 19 million euros under the item current miscellaneous payables; the payment schedule is the following:
  - 19 million euros by September 2019;
  - 110 million euros by September 2020;
  - 55 million euros by September 2021;
  - 1,738 million euros by September 2022.

Other non-current liabilities included:

- **Contract liabilities** equal to 109 million euros at December 31, 2018 and which are reversed to the income statement on the basis of the duration of the contractual obligations between the parties, equal to an average of 24 months; therefore the balance at December 31, 2018 will generally be reversed to the income statement by December 31, 2020. In particular, the item includes:
  - deferred revenues for activation and installation fees charged on new TIM S.p.A. customer contracts (20 million euros at December 31, 2018): to this regard, under previous accounting policies, revenues for activation and installation were deferred over the expected duration of the customer relationship. IFRS 15 instead requires that such revenues—given that they are not allocated to separate performance obligations—be allocated to other contract obligations and recognized throughout the period of performance of the contract;
  - deferred revenues for TIM S.p.A. network access fees (32 million euros at December 31, 2018);
  - deferred revenues for TIM S.p.A. subscription fees and rent and maintenance (49 million euros at December 31, 2018).
- **Other deferred revenue** and income totaling 595 million euros; the item mainly consisted of the non-current portion (approx. 190 million euros) of the deferred gain on the sale and lease-back of telecommunication towers by the Brazil Business Unit;this item also includes deferred income connected to the deferral of the revenue deriving from contracts for the sale of transmission capacity (operating asset leases).
- **Capital grants,** which came to 357 million euros at December 31, 2018: the item represents the component still to be released to the income statement based on the remaining useful life (estimated at around 18 years) of the assets that the grants refer to and is mainly connected to the realization of the infrastructures on the Ultra-Broadband-UBB and Broadband-BB projects.
- **Deferred income:** no longer present at December 31, 2018 as included in the aforementioned items. At December 31, 2017, deferred income totaled 988 million euros and mainly comprised:
  - the effect of the deferral of revenues from the activation of the telephone service of TIM S.p.A.;
  - the non-current portion of the deferred gain on the sale and lease back of the telecommunication towers of the Brazil Business Unit;
  - the deferral of revenues from the sale of transmission capacity.

NOTE 23—TRADE AND MISCELLANEOUS PAYABLES AND OTHER CURRENT LIABILITIES

Trade and miscellaneous payables and other current liabilities fell by 619 million euros compared to December 31, 2017 and were broken down as follows:

		As of December 31,			
		2018		2017	
			Of which Financial Instruments		*Of which Financial Instruments*
		(millions of euros)			
Payables on construction work	**(A)**	**18**		**19**	
Trade payables:					
Payables to suppliers		4,090	*4,090*	4,262	*4,262*
Payables to other telecommunication operators		380	*380*	383	*383*
	(B)	**4,470**	*4,470*	**4,645**	*4,645*
Tax payables	**(C)**	**262**		**584**	
Miscellaneous payables:					
Payables for employee compensation		151		245	
Payables to social security agencies		338		202	
Payables for "TLC operating fee"		15		15	
Dividends approved, but not yet paid to shareholders		35	*35*	19	*19*
Other		164	*105*	223	*174*
Employee benefits (except for Employee severance indemnities) for the current portion expected to be settled within 1 year		52		97	
Provisions for risks and charges for the current portion expected to be settled within 1 year		344		292	
	(D)	**1,099**	*140*	**1,093**	*193*
Other current liabilities					
Liabilities from contract with customers (Contract liabilities)		931	*193*		
Customer-related items				602	*77*
Advances received				69	
Other deferred revenue and income		121			
Trade and miscellaneous deferred income				508	
	(E)	**1,052**	**193**	**1,179**	**77**
Trade and miscellaneous payables and other current liabilities	**(A+B+C+E)**	**6,901**	**4,803**	**7,520**	**4,915**

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

The impacts caused by the adoption of IFRS 15 are summarized below:

		As of December 31, 2017	New IFRS adoption		As of January 1, 2018
			IFRS 15 reclassifications	*IFRS 15 adjustments*	
		(millions of euros)			
Payables on construction work	**(A)**	**19**	**—**	**—**	**19**
Trade payables:					
Payables to suppliers		4,262	—	—	4,262
Payables to other telecommunication operators		383	—	—	383
	(B)	**4,645**	**—**	**—**	**4,645**
Tax payables	**(C)**	**584**			**584**
Miscellaneous payables:					
Payables for employee compensation		245	—	—	245
Payables to social security agencies		202	—	—	202
Payables for "TLC operating fee"		15	—	—	15
Dividends approved, but not yet paid to shareholders		19	—	—	19
Other		223	—	—	223
Employee benefits (except for Employee severance indemnities) for the current portion expected to be settled within 1 year		97	—	—	97
Provisions for risks and charges for the current portion expected to be settled within 1 year		292	—	—	292
	(D)	**1,093**	**—**	**—**	**1,093**
Other current liabilities					
Liabilities from contract with customers (Contract liabilities)		—	1,033	(113)	920
Customer-related items		602	(602)	—	—
Advances received		69	(69)	—	—
Other deferred revenue and income			146	—	146
Trade and miscellaneous deferred income		508	(508)	—	—
	(E)	**1,179**	**—**	**(113)**	**1,066**
Trade and miscellaneous payables and other current liabilities	**(A+B+C+D+E)**	**7,520**	**—**	**(113)**	**7,407**

For more detailed information on the impacts caused by the adoption of IFRS 15, please refer to the Note "Accounting Standards".

Trade payables amounting to 4,470 million euros (4,645 million euros at December 31, 2017), mainly refer to TIM S.p.A. (2,925 million euros) and to the companies of the Brazil Business Unit (1,044 million euros); as regards TIM S.p.A., the reduction in trade payables reflects the trend in payments of bills payable.

Tax payables are equal to 262 million euros and refer to both tax payables of the Brazil Business Unit (139 million euros) and TIM S.p.A. payables relating to: withholding tax payables to the tax authorities as withholding agent (69 million euros), payables for government concession tax (21 million euros) and VAT payable (12 million euros).

Miscellaneous payables include, among others, the amount due to INPS for the application of the 2015 arrangements relating to Article 4 paragraphs 1-7ter, of Italian Law 92 of June 28, 2012, the "Fornero Law", as explained in the note "Miscellaneous payables and other non-current liabilities".

Other current liabilities amounted to 1,052 million euros (1,179 million euros at December 31, 2017). They break down as follows:

- Liabilities from customer contracts (Contract liabilities), totaling 931 million euros. The item emerged following the application of IFRS 15 to show the liabilities with customers associated with the Company's obligations to transfer goods and services for which it has received a consideration. Liabilities with customers are shown below, which generally have a maturity within 12 months; therefore, the balance as at December 31, 2017 was substantially reversed by December 31, 2018 while the balance as at December 31, 2018 is expected to be reversed to the income statement on average within the following year. In particular:
  - contract liabilities, equal to 119 million euros and recognized following the adoption of IFRS 15 due to contracts having performance obligations with different revenue recognition time schedules (such as bundled goods and services), where the services (recognized based on actual consumption) are offered to the customer at a discounted price. The increase of the year (84 million euros) is mainly connected to the start-up of commercial offers comprising some additional services supplied in the initial contract phase; as the relative fair value of these services is lower than the value invoiced, the application of IFRS 15 requires the reallocation of this higher value to the other performance obligations whose performance will be carried out over the term of the contract, on average equal to 24 months;
  - customer-related items, equal to 391 million euros; the item includes trade payables following contractual relationships, such as the payable for prepaid traffic and the subscription charges charged in advance; the decrease posted during the year is mainly attributable to the changes in the commercial offers, with less recourse to the advance of fees and charges, also as a result of changes in the billing procedures;
  - progress payments and advances equal to 121 million euros relating to trade payables following prepayments, such as deposits made by subscribers for telephone calls;
  - deferred revenues from customer contracts, equal to 300 million euros essentially include:
    - deferred revenues for the Parent interconnection charges (121 million euros);
    - deferred revenues for the Parent rent and maintenance (97 million euros);
    - deferred revenues for the Parent activation and installation fees charged on new customer contracts (59 million euros): to this regard, under previous accounting policies, revenues for activation and installation were deferred over the expected duration of the customer relationship. IFRS 15 requires that such revenues—given that they are not allocated to separate performance obligations—are allocated to other contract obligations, recognized on the basis of their performance.
- Other deferred revenue and income amounted to 121 million euros. At December 31, 2017, other deferred revenue and income was included in Trade and miscellaneous deferred income and referred mainly to deferred revenues from sales of transmission capacity and deferred revenues from real estate lease agreements (lease operating assets).
- Trade and miscellaneous deferred income: no longer present at December 31, 2018 as included in the aforementioned items. At December 31, 2017, these referred mainly to the Parent and included deferred interconnection charges, revenue for the activation of the telephone service, and rent and maintenance, traffic and outsourcing charges.

NOTE 24—CONTINGENT LIABILITIES, OTHER INFORMATION, COMMITMENTS AND GUARANTEES

A description is provided below of the most significant judicial, arbitration and tax disputes in which TIM Group companies are involved as at December 31, 2018, as well as those that came to an end during the period.

The TIM Group has provisioned 508 million euros for those disputes described below where the risk of losing the case has been considered probable.

It should be noted that for some disputes described below, on the basis of the information available at the closing date of the Annual Report and with particular reference to the complexity of the proceedings, to their progress, and to elements of uncertainty of a technical-trial nature, it was not possible to make a reliable estimate of the size and/or times of possible payments, if any. Moreover, in those cases in which disclosure of information on a dispute could seriously jeopardize the position of TIM or its subsidiaries, only the general nature of the dispute is described.

In relation to the proceedings with the Italian Competition Authority, based on Article 15, paragraph 1 of Italian Law 287/1990 ("Antitrust regulations"), the Italian Antitrust Authority has the right to impose an administrative sanction calculated on the turnover of the Group in cases of serious breaches.

A) SIGNIFICANT DISPUTES AND PENDING LEGAL ACTIONS

International tax and regulatory disputes

As at December 31, 2018, the Brazil Business Unit is involved in tax and regulatory disputes, the outcome of which is estimated as a possible loss amounting to 16.5 billion reais. The main types of disputes involved are listed below, classified on the basis of the taxation level to which they relate.

Federal Taxes

On March 22, 2011, TIM Celular S.A. (a company incorporated into TIM S.A. starting from October 31, 2018) was served notice of a tax assessment issued by the Federal Tax Authorities of Brazil for a total sum of 1,265 million reais as of the date of the notification, including fines and interest, as a result of the completion of a tax investigation of financial years 2006, 2007, 2008 and 2009 for the companies TIM Nordeste Telecomunicações S.A. and TIM Nordeste S.A. (formerly Maxitel), companies which have been progressively incorporated into TIM Celular with the aim of rationalizing the corporate structure in Brazil.

The assessment notice includes various adjustments; the main claims may be summarized as follows:

- non-recognition of the fiscal effects of the merger of TIM Nordeste Telecomunicações S.A. and Maxitel S.A.;
- non-recognition of the tax-deductibility of the write-down of goodwill relating to the purchase of Tele Nordeste Celular Participações S.A. ("TNC");
- denial of certain tax offsets; and
- denial of the SUDENE territorial tax benefit due to alleged irregularities in the management and reporting of the benefit.

The adjustments included in the assessment notice were challenged by TIM Celular, in administrative proceedings, through the presentation of its first objections on April 20, 2011. On April 20, 2012, TIM Celular received notification of the decision of the administrative court of first instance which confirmed the findings set out in the assessment notice; TIM Celular promptly filed an appeal against this decision on May 21, 2012.

The Company, as confirmed by fitting legal opinions, believes it is unlikely that the company could suffer any negative consequences in relation to these matters.

At the federal level, disputes involving the following are also noted:

- use of tax losses;
- tax deductibility of the amortization of goodwill;
- taxation on income from certain types of exchange movements;
- withholding of taxes on certain types of payments made abroad (for example, payments for international roaming); and
- offsetting between debt taxes and credit positions of group companies.

The overall risk involved in connection with these cases that is considered possible amounts to 4.0 billion reais as of December 31, 2018.

State Taxes

In connection with state taxes, there are numerous disputes regarding ICMS, and in particular:

- disputes concerning the reduction of the tax base through discounts granted to customers: in addition to disputes regarding the use of tax credits declared by group companies against the repayment of telephone terminals on loan, and following the detection of subscription fraud perpetrated against the companies, subjecting certain types of fees to ICMS, accrued in favor of group companies and classified by them as fees for services other than telecommunications;
- disputes concerning the use of the "PRO-DF" tax benefit originally granted by some states and subsequently declared unconstitutional (the dispute refers to the actual credit for ICMS, declared by the TIM Celular on the basis of the aforementioned facilitation provisions);
- disputes relating to the use of credits for ICMS, recognized by Group companies as a result of the acquisition of tangible assets, and in relation to the supply of electricity to the Companies, as well as in the application of the provisions on acting as a withholding agent; and
- penalties imposed on group companies for irregularities in tax return compliance.

In February 2018 the State of São Paulo notified two tax assessments regarding ICMS to TIM Celular, for a total amount of 679 million reais (at the date of the assessment, including fines and interest). The first assessment (344 million reais) regarded a challenge of ICMS credits in relation to acting as a withholding agent, applicable when equipment is bought and distributed in different States. The second assessment (335 million reais) challenged ICMS credits deriving from the "special credit" recognized by the company to its prepaid customers, against subsequent top-ups.

In June 2018 the State of São Paulo notified TIM Celular of two further tax assessments, again relating to ICMS, for a total amount of 369 million reais (as of the date of the assessment, including fines and interest). This assessment relates to ICMS credits deriving from the "special credit" recognized by TIM Celular (incorporated by TIM S/A to its prepaid customers against subsequent top-ups, as well as to the fines imposed for ICMS breaches. For a portion of the claim, TIM Celular authorized payment of the amount requested (73 million reais), instead of starting legal proceedings, benefiting from a discount on the fine. The dispute continues for the remaining amount of 296 million reais.

Overall, the risk for these cases that considered possible amounts to 8.9 billion reais as of December 31, 2018.

Municipal Taxes

Among disputes classified with a "possible" degree of risk, there are some relating to municipal taxes for a total amounting to around 0.7 billion reais as of December 31, 2018.

FUST and FUNTTEL

The main complaints concerning the contributions to the regulatory body (Anatel), and in particular in terms of FUST and FUNTTEL, concern the subjection of revenues from interconnection to these withdrawals.

Altogether the risk for such cases, considered possible, amounts to 2.9 billion reais as of December 31, 2018.

Exclusion of ICMS from the PIS/COFINS tax base

In March 2017, the Supreme Federal Court of Brazil recognized the inclusion of ICMS in the calculation of the PIS/COFINS contribution as unconstitutional. TIM Participações, through its subsidiary company TIM S.A. (previously named "Intelig Telecomunicações Ltda"), as the incorporating company of TIM Celular S.A., as well as other companies belonging in the past to the Tim Brasil Group, that submitted applications of the same nature, have been involved in legal proceedings since 2006, requesting reimbursements within the statutory period of five years (from 2001).

Taking into account the ruling of the aforementioned Supreme Court, in favor of taxpayers, TIM Celular with the approval of its legal advisors, decided not to include ICMS when calculating the PIS/COFINS contribution, beginning in April of 2017.

For some of these proceedings, the Court of Appeal has already given a favorable decision, in line with that of the Supreme Court, and the appeals presented by the tax authorities were rejected, on the basis of the same arguments. Despite the tax authorities representative's request to limit the retroactive nature of the decisions, the Company—again with the approval of its legal advisors, believes that the decisions will not affect the rights claimed through legal proceedings.

The Company has estimated that at the end of the proceedings, after the definitive rulings and completion of consequential activities, the receivables would amount to approximately 3.3 billion reais, of which 1.9 billion reais from tax, and 1.4 billion reais from legal revaluation. Moreover, in respect of this potential tax credit, in the course of 2018, following a definitive and indisputable decision, the Company recognized a receivable of to 353 million reais.

Administrative offense charge pursuant to Legislative Decree 231/2001 for the so-called TIM Security Affair

In December 2008 TIM received notification of the application for its committal for trial for the administrative offense specified in articles 21 and 25, subsections 2 and 4, of legislative decree no. 231/2001 in relation to the affairs that involved several former employees of the Security function and former collaborators of the Company charged among other things with offences involving corruption of public officials, with the object of acquiring information from confidential files. In May 2010 TIM ceased being a defendant in the criminal trial, after the Judge for the Preliminary Hearing approved the motion for settlement of the proceedings (plea bargaining) presented by the Company. In the hearing before Section One of the Milan Court of Assizes, TIM acted in the dual role of civil party and civilly liable party. In fact, on the one hand it was admitted as civil party against all the defendants for all charges, and on the other it was also cited as the party with civil liability pursuant to article 2049 of the Italian Civil Code for the actions of the defendants in relation to 32 civil parties. Telecom Italia Latam and Telecom Italia Audit and Compliance Services (now incorporated into TIM) also participated in the hearing as civil parties, having filed appearances since the Preliminary Hearing and brought charges against the defendants for hacking.

After the lengthy evidentiary hearings, 22 civil parties filed claims for compensation, including against TIM as civilly liable party, for over 60 million euros (of which over 42 million euros was requested by a single civil party). The Company itself, as civil party, also summarized its conclusions against the defendants, requesting that they be found liable for all the damages suffered as a result of the facts of the case. In February 2013, Section 1 of the Milan Court of Assizes issued the first instance judgment, sentencing the defendants to terms of imprisonment of between 7 years and 6 months and one year. The Court also recognized that there had been non-pecuniary damage to some of the civil parties as a consequence of the alleged facts, and sentenced the defendants, jointly and severally with civilly liable party TIM, to compensate said damages, totaling 270,000 euros (in part jointly and severally with Pirelli) plus legal fees; at the same time the Court also sentenced the defendants to pay compensation for pecuniary and non-pecuniary damages incurred by the Company, granting it a provisional sum of 10 million euros. The judgment also recognized the existence of non-pecuniary damage to the companies Telecom Italia Latam and Telecom Italia Audit & Compliance Services, sentencing the defendants to pay compensation for damages on an equitable basis of 20,000 euros for each company. In November 2013 the grounds for the judgment in the first instance were published (which, for its part, the Company decided not to contest). At the end of the appeal, which was brought by the convicted defendants, the judgment in the first instance was partly reversed. The appeal judge took note of the fact that the time-limit had expired on the majority of the charges, and made an order not to proceed against the defendants who had been convicted in the lower court, with the exception of two, who were found guilty of the offence of revealing information which was subject to a prohibition on disclosure. As for the civil judgments, the Court revoked those made by the judge of first instance and ruled in favor of three ministries, AGCM and the Revenues Agency. The Court also decided to revoke the provisional sum of 10 million euros awarded to the Company as civil party at the end of the proceedings in the court of first instance, making a generic ruling that the defendants should pay compensatory civil damages. Finally, the appeal judge also rejected all the demands for compensation advanced on appeal by certain civil parties for a total of about 60 million euros, in respect of which the Company has the role of party

liable for damages. At the end of the appeal, therefore, the appeals court upheld the prior ruling, confirming that TIM, as the party liable for damages, had already paid the parties. The three defendants brought an appeal to the Court of Cassation against the judgment of appeals court issued by the Milan Appeal Court of Assizes.

In April 2018 the Supreme Court of Italy confirmed the convictions of the defendants and canceled the civil rulings, remanding the issue generically to the civil court, for a more careful assessment of the claims made, above all concerning the quantum of evidence. It also canceled and remanding the confiscation in favor of the State, which will have to be reassessed by a different section of the Milan Court of Assizes of Appeal.

Golden Power Case

In August 2017 the office of the Prime Minister initiated proceedings against TIM and Vivendi in order to verify the fact that TIM has an obligation to notify, pursuant to the Golden Power provisions, Vivendi's acquisition of corporate control of TIM and the strategic assets it holds. In September 2017, the proceedings in question concluded by ascertaining that this obligation did exist for TIM effective as of May 4, 2017 the date of the shareholders' meeting that renewed TIM's corporate bodies.

As a result of this decision of the office of the Prime Minister a new administrative procedure was started for the possible imposition on TIM of a pecuniary sanction according to the Golden Power provisions for non-compliance with the notification obligation. The procedure was closed on May 8, 2018 with the imposition of a fine of 74.3 million euros.

The Company believe it will be able to demonstrate that there were no obligations to notify with respect to Vivendi's control and it has already submitted an extraordinary appeal to the President of the Republic to request the cancellation of the order of September 2017 and appealed the aforementioned fine and decision of May 8, 2018 requesting its precautionary suspension. With an order in July 2018, the Lazio TAR granted this application and suspended payment of the fine, setting a date for the appeal. In May 2018, a guarantee bond for 74.3 million euros was also issued in favor of the office of the Prime Minister. TIM was requested to submit such bond for its application to the Lazio TAR for precautionary suspension of the collection of the fine imposed for alleged breach of Article 2 of Decree Law 21 of March 15, 2012 the "Golden Power" law.

Moreover, the office of the Prime Minister exercised the special powers laid down by the Golden Power provision through two specific rulings in October and November 2017 with which it set specific prescriptions and conditions on TIM S.p.A. and the companies of the Telecom Italia Group, Telecom Italia Sparkle and Telsy Elettronica e Telecomunicazioni.

The prescriptions, according to the Administrative Authority, are premised on understanding that these companies, in part, perform activities relevant for national security and as far as TIM is concerned to the fact that it owns the infrastructure and the systems used to provide access to end-users of services covered by the universal service obligation.

Any failure on the part of the recipients of the orders to execute the conditions and prescriptions is sanctioned in the same way as failure to notify significant acts for the purpose of the application of Golden Power provisions.

The companies subject to the prescriptions are required to send periodic reports to a special Monitoring Committee established at the office of the Prime Minister in order to verify compliance with the aforementioned prescriptions.

In December 2017 the Group sent the office of the Prime Minister the first compliance report outlining all the proposals and activities put in place to follow through with the prescriptions.

TIM has also submitted an extraordinary appeal to the President of the Republic in this instance to request cancellation of the orders in question.

The premise for exercising special powers was referred to the de facto control resulting from the outcome of the shareholders' meeting of May 4, 2017 and to the direction and coordination of TIM by Vivendi. Both of these circumstances no longer apply, given:

- at the shareholders' meeting of May 4, 2018, the slate presented by the shareholders Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership received the majority vote;
- the Board of Directors was re-appointed with 13 independent directors out of a total of 15, with only 5 from the slate presented by Vivendi; and
- Vivendi no longer has direction and coordination, nor is there *de facto* control as a result.

Consequently, the Company requested the office of the Prime Minister to revoke the two decrees and communicated that, in the alternative, it was willing to cooperate with the office to define new measures applicable to TIM in view of the changed situation.

In a decree of July 6, 2018, the Prime Minister's Office did not consider an additional exercise of special powers, upholding the validity of the two Decrees already issued and rejecting the request to revoke them. The office of the Prime Minister reasoned that the new governance structures of the Company would be highly variable and thus would not allow for the rulings according to which the special powers were exercised to be overruled, save for the need to protect the public interest as regards network security and operation.

The Company filed additional arguments against the Prime Minister's resolution of July 6, 2018, rejecting the appeal for revocation presented by the Company on the outcome of their changed corporate governance situation in the previous appeals filed against the Prime Minister's decrees of October 16 and November 2, 2017.

Italian Competition Authority Case A428

At the conclusion of case A428, in May 2013, Italian Competition Authority AGCM imposed two administrative sanctions of 88,182,000 euros and 15,612,000 euros on TIM for abuse of its dominant position. The Company allegedly (i) hindered or delayed activation of access services requested by OLOs through unjustified and spurious refusals; (ii) offered its access services to final customers at economic and technical conditions that allegedly could not be matched by competitors purchasing wholesale access services from TIM itself, only in those geographic areas of the Country where disaggregated access services to the local network are available, and hence where other operators can compete more effectively with the Company.

TIM contested the decision with the Lazio Regional Administrative Court (TAR) in July 2013, requesting suspension of payment of the fine. Specifically, TIM argued that: the right of defense in the proceedings had been infringed; that the alleged organizational arrangements disputed by the AGCM and purportedly at the basis of the infringement of provisioning processes for OLOs had been the subject of specific provisions by the Authority for the sector (AGCom); that a comparative analysis of internal/external provisioning processes in truth resulted in improved outcomes for the OLOs with respect to TIM's Retail division and as such no form of inequality of treatment and/or opportunistic conduct by TIM existed; and (with reference to the second count of abuse) that the conduct challenged was not capable of squeezing the margins of the OLOs.

In May 2014, the judgment of the Lazio TAR was published, rejecting TIM's appeal and confirming the fines imposed in the original order challenged. In September 2014 the Company appealed against this decision.

In May 2015, with the judgment no. 2497/15, the Council of State found the decision of the court of first instance did not present the deficiencies alleged by TIM and confirmed the AGCM ruling. The company had already proceeded to pay the fines and the accrued interest.

In a decision notified in July 2015, AGCM started proceedings for non-compliance against TIM, to ascertain if the Company had respected the order to abstain from engaging in practices analogous to those ascertained by the final decision in the A428 case of May 2013.

On January 13, 2017 TIM was notified of the conclusive assessment of the Italian Competition Authority (AGCM), acknowledging that TIM has fully complied with the judgment in proceedings A428 and that therefore the conditions did not exist for the imposition of any sanctions for non-compliance.

AGCM also recognized that TIM's behavior subsequent to the 2013 proceedings had been focused on continuous improvement of its performance in the supply of wholesale access services concerning not only the services which were the subject of the investigation, but also new, super-fast broadband access services. In assessing compliance, AGCM recognized the positive impact of the ongoing implementation of TIM's New Equivalence Model (NME). The AGCM decision orders TIM to: (i) proceed with the implementation of the NME until its completion which is expected to be by April 30, 2017; (ii) to inform the Authority about the performance levels of the systems for providing wholesale access services and about the completion of the corresponding internal reorganization plan by the end of May 2017. The Company quickly complied with both orders, and AGCM communicated its satisfaction on August 9, 2017.

Vodafone lodged an appeal with the Lazio Regional Administrative Court against the final decision in the proceedings for non-compliance taken by AGCM. TIM filed an appearance, as it did in the further proceedings brought in the month of March 2017 by the operators CloudItalia, KPNQWest Italia and Digitel.

Vodafone (A428)

In August 2013, Vodafone, as incorporating company of operator Teletu, submitted to the Milan Court a huge claim for damages for presumed abusive and anticompetitive behavior (founded principally on ICA case A428) which TIM allegedly implemented in the period 2008-2013. The pecuniary claim was quantified by Vodafone as an estimated sum of between 876 million euros and 1,029 million euros.

In particular, Vodafone alleged technical boycotting activities, with refusal to activate lines requested for Teletu customers (in the period from 2008 to the month of June 2013), together with the adoption of allegedly abusive price policies for wholesale network access services (period from 2008 to the month of June 2013). Furthermore, the other party complained of the presumed application of discounts to business customers capable of squeezing competitors' margins ("margin squeeze") and the carrying out of presumed illegal and anticompetitive winback practices (in the period from the second half of 2012 to the month of June 2013).

TIM filed an appearance, challenging the claims made by the other party regarding the merits and the amount and making a counterclaim. Following the August 2016 decision by the Court of Cassation which confirmed that the Milan Court had jurisdiction to decide the dispute, the merits of the case will be decided at the hearing in December 2016.

With a writ of summons dated May 28, 2015 before the Milan Court, Vodafone has advanced further claims for compensation, based on alleged practices similar to those ascertained by the ICA in case A428 and referring to alleged damages it suffered in the period July 2013-December 2014 (and therefore over a period of time subsequent to the period of the similar compensatory judgment mentioned above), for approximately 568.5 million euros.

The case also contains a reservation of further damages to be quantified, during the proceedings, for the following periods, the claimant alleging that the presumed abusive conduct of TIM continued. TIM filed an appearance, challenging the claims made by the other party regarding the merits and the amount and making a counterclaim.

In an order made on October 6, 2016, the judge accepted Vodafone's petition to join the two A428 proceedings it had initiated. At the end of the reinstatement proceedings of December 21, the terms were established for the preliminary briefs and a hearing was fixed for July 11, 2017 for the admission of evidence.

When the first preliminary brief was filed, following the favorable outcome for TIM of proceedings A428-C (which confirmed the absence of improper conduct by the Company under A428 after 2013), Vodafone decided nonetheless to file further claims for 2015-2016, thus restating its total claim to be 1,812 million euros, which was also disputed and rebutted by TIM.

COLT TECHNOLOGY SERVICES

With a writ of summons served in August 2015 before the Milan Court, operator Colt Technology Services claimed damages based on the decisive order in case A428, referring to alleged damages suffered over the period 2009/2011, due to the presumed inefficient and discriminatory conduct of TIM in the process of supplying

wholesale services. The damage claim was quantified as 27 million euros in loss of profits for the alleged non-acquisition of new customers, or for the alleged impossibility of supplying new services to the customers it had already acquired; the other party also formulated a request for compensation for the damages to its image and commercial reputation. This case follows the extrajudicial claim for approximately 23 million euros, previously advanced by Colt in June 2015, which the Company rejected in its entirety. TIM filed an appearance, contesting all of the plaintiff's allegations.

KPNQWest Italia S.p.A.

With a writ of summons before the Rome Court, KPNQWest Italia sued TIM, claiming damages totaling 37 million euros for alleged abusive and anti- competitive conduct in the period 2009-2011, through technical boycotting (refusals to activate wholesale services—KOs); these claims were based on the content of the Italian Competition Authority decision in the A428 case. TIM filed an appearance, contesting all of the plaintiff's allegations. The first hearing took place in May 2016.

TELEUNIT

With a writ of summons before the Rome Court, Teleunit claimed 35.4 million euros in compensation from TIM, based on the known decision of the Italian Competition Authority that settled the A428 case. Specifically, the other party complained that in the period 2009/2010 it had suffered abusive conduct on TIM's part in the form of technical boycotting (refusals to activate network access services—KOs), and anticompetitive practices in the form of margin squeezing (excessive squeezing of discount margins, considered abusive inasmuch as it cannot be replicated by competitors). TIM filed an appearance, contesting all of the plaintiff's allegations.

With a writ of summons issued in October 2009 before the Milan Appeal Court, Teleunit asked that TIM alleged acts of abuse of its dominant position in the premium services market be ascertained. The plaintiff quantified its damages at a total of approximately 362 million euros. TIM filed an appearance, contesting the claims of the other party.

After the ruling of January 2014 with which the Court of Appeal declared that it was not competent in this matter and referred the case to the Court, Teleunit reinstated the case before the Milan Court the following April. TIM filed an appearance in the reinstated proceedings challenging the plaintiff's claims.

In its May 2017 judgment, the Milan Court rejected Teleunit's claim in its entirety, and ordered the company to pay the legal costs of the case. This judgment was appealed by Teleunit, in June 2017, before the Milan Court of Appeal. TIM filed an appeal challenging the arguments presented by the other party and asking that the judgment in the first instance be fully confirmed.

In its March 2018 order, the Milan Court of Appeal declared Teleunit's appeal (pursuant to Article 348-bis of the Italian Code of Civil Procedure) to be manifestly without foundation, and thus inadmissible. In May 2018 Teleunit appealed the judgment of the Court of Appeal to the Court of Cassation. TIM served a defense on the appellant, requesting that the appealed ruling (including the judgment in the first instance) be confirmed in full.

SIPORTAL

The claim brought against TIM by Siportal is pending before the Rome Court. It claims a total of approximately 48.4 million euros for alleged damages due to the technical boycotting it suffered from 2009 to 2011 and the inertial effects of the abuse until 2015, with the loss of commercial partners and further customer acquisitions (the last damage item has been quantified as 25 million euros). The suit is based on the known Competition Authority ruling that settled case A428. The Company filed an appearance, rejecting all of the other party's allegations.

MC-Link

MC-Link filed a damages claim for 51 million euros by writ of summons before the Rome Court, as compensation for TIM's alleged anticompetitive and abusive conduct over the period 2009-2012 in the form of technical boycotting (refusals to activate wholesale access lines—KOs). The claim was based on of the decision of the Italian Competition Authority in the A428 case. TIM filed an appearance, contesting all of the plaintiff's allegations. The first hearing took place in February 2019.

Italian Competition Authority Case I-761

With a ruling issued on July 10, 2013, AGCM (the Italian Competition Authority) included TIM in the investigation started in March 2013 into firms active in the fixed network maintenance sector. The investigation aims to establish if an agreement prohibited under article 101 of the Treaty on the Functioning of the European Union existed among firms.

The proceedings were initiated after Wind filed two complaints in which the ICA was informed that, based on an invitation to bid for the assignment of network corrective maintenance services, it had encountered substantial uniformity of prices offered by the aforementioned enterprises and a significant difference from the offers submitted subsequently by other and different companies.

The ICA alleged that TIM carried out a role of coordinating the other parts of the procedure, both during the formulation of the offers requested by Wind and in relation to the positions represented to communications regulator AGCom.

TIM challenged these proceedings before the Administrative Court (TAR), sustaining that the ICA does not have competence in this matter.

On July 7, 2014, the ICA announced the extension of the proceedings to confirm whether the Company, abusing its dominant position, put in place initiatives that might influence the conditions of the offer of accessory technical services when the offers of the maintenance businesses to Wind and Fastweb were being formulated. With the extension provision, the ICA has also extended the deadline for closing the proceedings from the original date of July 31, 2014 to July 31, 2015. This extension was also challenged before the Lazio Administrative Court (TAR) sustaining that the Italian Competition Authority does not have competence in this matter.

In November 2014, for reasons of procedural economy and also convinced that it was acting legitimately, TIM presented to the Authority a proposal of undertakings in order to resolve the competition concerns subject of the investigation. In its resolution of December 19, 2014 the ICA considered that these undertakings were not manifestly groundless and later ordered their publication for the purposes of market testing.

On March 25, 2015, the ICA definitively rejected the aforesaid undertakings, considering them not suitable for removing the anticompetitive aspects investigated.

On July 21, 2015 the Communication of the Results of the Investigation was served on the parties to the proceedings, in which the Offices of ICA expressed their position in the sense of (i) archiving the complaints regarding the abuse of dominant position and (ii) confirming, instead, that there exists between TIM and the maintenance firms an agreement to coordinate the economic offers drawn up for Wind and Fastweb, and to prevent the unbundled supply of the ancillary technical services.

On December 16, 2015, the final order was issued, confirming the conclusions of the Communication of the Results of the Investigation, sustaining that, between 2012 and 2013, there existed an agreement that restricted competition, and as a result imposed on the Company a fine of 21.5 million euros. In March 2016, the Company payed it. The relevant market is the corrective maintenance (assurance) market and, more precisely, the market for troubleshooting the TIM LLU lines. The purpose of the conduct maintained by the Company and the network firms would have been to limit competition and prevent the evolution of forms of unbundled supply of ancillary technical services.

TIM appealed the order before the Lazio Regional Administrative Court. In judgment no. 09554/2016 issued in September 2016, the appeal was dismissed, and the Company appealed this decision to the Council of State. The appeal before the Council of State is still pending.

WIND (I-761)

With a writ of summons before the Court of Milan, Wind sought a 57 million euro compensation from TIM for damages arising from alleged anti-competitive conduct censured in the ICA case I-761 (on corrective

maintenance). According to the plaintiff, this conduct delayed and hindered its ability to obtain more favorable conditions in the unbundled purchase of service to repair faults on the LLU access lines, and their effects, initially stated to have been lasted until December 2015 and subsequently alleged by Wind to be ongoing, TIM filed an appearance challenging the plaintiff's requests. The proceeding is still pending.

VODAFONE (I-761)

With a writ of summons before the Milan Court, Vodafone sued TIM and other network companies, seeking compensation from the Company (and from the other network companies) of approximately 193 million euros for damages arising from alleged anti-competitive conduct censured in the ICA case I-761 (on corrective maintenance). The period of the alleged infringements is 2011 to 2017.

More precisely, Vodafone alleges TIM breached competition rules in the wholesale markets for the access to its fixed network (LLU lines; Bitstream; WLR), through the abuse of a dominant position and an unlawful agreement with the maintenance companies to keep the monopoly on the offer of corrective maintenance services on its network. In particular, this restrictive agreement would have concerned the coordination, by the Company, of the financial conditions contained in the offers submitted by the aforementioned maintenance companies to the OLOs at artificially high prices, in order to give the impression that the unbundling of the service itself were not convenient. The Company filed an appearance, contesting all of the other party's requests. The proceeding is still pending.

Italian Competition Authority Case A514

In June 2017 the Italian Antitrust Authority (AGCM) started proceedings A514 against TIM, to ascertain a possible abuse of its dominant market position in breach of article 102 of the "Treaty on the Functioning of the European Union". The proceedings were started based on complaints filed in May and June 2017, by Infratel, Enel, Open Fiber, Vodafone and Wind Tre, and concerns a presumed abuse of TIM's dominant position in the market for wholesale access services and for retail services using the broadband and ultrabroadband fixed network.

In particular, the AGCM hypothesized that TIM had adopted conduct aimed at: i) slowing and hindering the course of the Infratel tender processes so as to delay, or render less remunerative the entry of another operator in the wholesale market; ii) pre-emptively securing customers on the retail market for ultrabroadband services by means of commercial policies designed to restrict the space of customer contendibility remaining for the competitor operators.

After the start of the proceedings, the Authority's officials carried out an inspection at some of TIM's offices in the month of July 2017. On November 2, 2017, TIM filed a defense in which, in support of the correctness of its actions, it challenged all the arguments that the behavior it had allegedly indulged in, and which are the object of the case, were actually unlawful.

On February 14, 2018, AGCM resolved to extend the scope of the case to investigate further behavior concerning TIM's wholesale pricing strategy on the market for wholesale access to broadband and ultra-broadband and the use of the confidential information of customers of the alternative operators. On July 5, 2018, TIM filed proposed undertakings which, if accepted by the Authority, would close the investigation without any offense being established or sanction being administered. The undertakings were considered as admissible by the Authority, that market tested them in August and September 2018.

On October 30, 2018, TIM replied to observations made by third parties during the market test. Third parties expressed concerns about the effectiveness of the undertakings offered by TIM. As a result, in order to meet these concerns, TIM modified its proposed undertakings. In its December 4, 2018 decision, the Italian Antitrust Authority (AGCM) ultimately rejected the proposed series of undertakings as it considered them unsuitable in light of the objections raised. The proceeding is currently set to end by May 31, 2019.

Antitrust Case I799

On February 1, 2017, AGCM initiated investigation proceedings for possible breaches of Article 101 TFEU (ban on competition-restricting agreements) against TIM S.p.A. and Fastweb S.p.A., following the signing of an agreement

aimed at establishing a joint cooperative enterprise Flash Fiber S.r.l.. In agreement with Fastweb, TIM has submitted several amendments to the agreements signed to the AGCM, in the form of proposed commitments, aimed at settling the proceedings without accepting the violation and, therefore, without any financial penalty. On March 28, 2018 AGCM resolved to approve the undertakings, make them binding on each party, and closed the proceeding without the imposition of any fine.

On June 11, 2018, Open Fiber S.p.A. and Wind Tre S.p.A. filed separate appeals to the Lazio Regional Administrative Court (TAR) against the order closing case I-799 with the acceptance of the undertakings. They allege that this order had a series of procedural and substantial defects. Open Fiber S.p.A. also asked for precautionary suspension of the order. In its July 19, 2018 ruling, the TAR rejected Open Fiber's request for precautionary suspension since there were no exigent circumstances. Open Fiber's appeal hearing is set for February 2020 and Wind Tre's is set for May 2019.

Vodafone

In June 2015 Vodafone issued proceedings for damages in the Milan Court for alleged abuse of a dominant position by TIM in the bitstream "NGA" and "VULA" fibre access services market, initially claiming around 4.4 million euros, increased to a figure ranging from 30 to 48.9 million euros.

The complaint alleged that TIM implemented aggressive offers to obtain customers hindering of Vodafone's access to the fibre network to make it more difficult for it to provide ultrabroadband service to its customers.

The Company filed an appearance contesting all the allegation of the other party, and subsequently also its revision of the size of the damages claimed during the proceedings in 2016.

EUTELIA and VOICEPLUS

In June 2009, Eutelia and Voiceplus asked that alleged acts of abuse by TIM of its dominant position in the premium services market (based on the public offer of services provided through so-called Non Geographic Numbers) be investigated. The complainants quantified their damages at a total of approximately 730 million euros.

The case follows a precautionary procedure in which the Milan Appeal Court prohibited certain behaviors of the Company relating to the management of some financial relations with Eutelia and Voiceplus concerning the Non Geographic Numbers, for which TIM managed the payments from the end customers, on behalf of such OLOs and in the light of regulatory requirements. After the ruling with which the Milan Court of Appeal accepted TIM's objections, declaring that it was not competent in this matter and referring the case to the Civil Court, Eutelia in extraordinary administration and Voiceplus in liquidation resubmitted the matter to the Milan Court. The first hearing took place in the month of March 2014. TIM filed an appearance challenging the claims of the other parties. After the collapse of Voiceplus, the Milan Court declared the case suspended, in an order in September 2015. The case was later resumed by Voiceplus.

With a judgment issued in February 2018, the Milan Court accepted TIM's defense and rejected the plaintiffs' claim for compensation, ordering them, jointly and severally, to pay the legal costs. In March 2018, Eutalia and Voiceplus proposed an appeal against the judgment in the first instance. TIM appealed the claim, requesting confirmation in full of the judgment in the first instance.

SKY

In 2016, TIM initiated civil proceedings against SKY Italia in the Milan Court, asking the court to void a contract signed by the two companies in April 2014 for the delivery and marketing, between 2015 and 2019, of the SKY IPTV (Internet Protocol Television) offer on the TIM IPTV platform, due to abuse of dominant position by Sky Italia.

In the alternative, the Company also asked the court to reduce to a fair level the amounts demanded by SKY by way of the so-called Guaranteed Minimums ("penalties") alleging that they were established to SKY's advantage and related to predetermined customer sign-up and churn-rate thresholds in the five years of the partnership.

SKY filed an appearance in February 2017, challenging TIM's claim and demanding payment of the Guaranteed Minimums it claimed to have accrued, a request which was opposed by the Company. TIM is waiting for a decision after the hearing held on April 4, 2019.

28-day billing

Resolution 121/17/CONS, of March 2017, with which AGCOM supplemented its resolution 252/16/CONS, constitutes the concluding act of a regulatory process intended to safeguard price transparency and comparability of economic terms and conditions.

Resolution 121/17/CONS, inter alia, introduced instructions on billing intervals for telephony, prescribing, specifically for fixed telephony, that the interval should be monthly, or multiples thereof, and, for mobile telephony, that it should be at least four-weekly.

TIM appealed Resolution 121/17/CONS to the Regional Administrative Court, alleging that AGCOM was exceeding its powers; the judgement rejecting the appeal was published on February 12, 2018.

TIM will challenge the decision to the Council of State.

In December 2017, AGCOM, with Resolution 499/17/CONS, found that TIM had breached the provisions of Resolution 121/17, by adopting intervals of a month, or multiples thereof, as the basis for billing its fixed telephony offers. It fined TIM 1,160,000 euros, ordering it take action—when the billing cycle was restored to monthly or multiples thereof—to reverse the charges levied for the number of days after June 23, 2017 that the users had not used the service due to the lack of alignment between the four-weekly and the monthly billing cycle.

TIM also appealed this second Resolution to the Regional Administrative Court of Lazio, asking for a preliminary suspension which, on February 22, 2018, was accepted by the Regional Administrative Court of Lazio limited to the reimbursement orders and the scheduling the hearing for consideration of the merits on November 14, 2018.

Law no. 172 of December 4, 2017 decreed that contracts for the supply of electronic communications services should obligatorily prescribe that the renewal of offers and the invoicing of services be based on a month, or multiples thereof.

TIM will adapt to this order within the period of time prescribed by law, namely, within 120 days of April 5, 2018 when the law goes into effect.

On March 7, 2018, TIM was notified of a further resolution (Resolution 112/2018/CONS) with which AGCOM (i) warned the Company, with regard to fixed phone services only, to postpone the starting date of invoices issued after the return to monthly invoicing by the same number of days as those presumably deducted starting from June 23, 2017 with the four-weekly invoicing cycle; and (ii) revoked in the part resolution 499/17/CONS, in which TIM was ordered to repay the amounts presumed eroded starting from June 23, 2017, with the four-weekly billing cycle.

The aforementioned resolution was challenged by TIM on March 16, 2018, with an additional submission triggered as part of the appeal against resolution 499/17/CONS and a request for single precautionary measures, which was provisionally granted until the hearing before the Council on April 11, 2018, and with a Presidential Decree published on March 26, 2017.

After the notification by AGCom, on April 9, 2018, of Presidential Decree 9/18/PRES, which amended resolution 112/18/CONS in respect to parts prescribing that deferment of billing had to take place when the billing cycle was restored to monthly intervals, or multiples thereof, also ordering that the timescales for complying with the order would be identified after hearings with the operators and the main consumer protection associations, TIM and the other operators affected by the Presidential Decree withdrew their application for precautionary measures.

On May 7, 2018, TIM also appealed AGCom Presidential Decree 9/18/PRES and Resolution 187/18/CONS, which ratified this decree. On July 3, 2018, AGCom published new resolution (269/18/CONS), with which it set December 31, 2018 as the date by which the operators must return to their fixed network customers a number of days of service equal to those eroded as an effect of 28-day billing, or offer to the affected customers any alternative compensatory measures, after having notified AGCom of them. In line with the actions it has undertaken and the arguments it has made so far. TIM appealed this resolution.

In September 2018, TIM also appealed Resolution 297/18/CONS, in which AGCom imposed a fine of 696,000 euros for having continued to adopt weekly billing and renewal of offers as from February 16, 2018 in violation of AGCom Resolution 121/17/CONS.

With the judgement published in November 2018, the TAR canceled the pecuniary administrative sanction of 1.16 million euros imposed with Resolution 499/17/CONS, and confirmed the obligation of restitutio in integrum to the fixed-line customers by December 31, 2018. TIM submitted its preventive appeal before the Council of State to interrupt the execution of said decision and, with its ruling of December 20, 2018, the Council of State, in upholding TIM's appeal, interrupted the effectiveness of the aforesaid decision for the reversal order only, until March 31, 2019. On March 19, 2019, after an additional submission for precautionary suspension by TIM, the Council of State has extended the deadline for the execution of the decision until May 21, 2019 (the date of next hearing).

On November 30, 2018, AGCom published resolution 521/18/CONS with which it imposed a sanction of 1,044,000 euros on TIM. The sanction was imposed for breach of the transparency rules and rights to withdraw in amending the contractual terms and conditions of the mobile offers applied to customers starting from April 8, 2018 following restoration of monthly billing. TIM appealed this resolution to the Regional Administrative Court in January 2019.

Antitrust Case I820

Lastly, on February 19, 2018 the AGCM initiated a I820 preliminary, statutory investigation against the companies TIM, Vodafone, Fastweb, Wind-Tre and the Association of category (ASSTEL) to determine whether an understanding existed aiming to limit competition between the main fixed and mobile telephony operators through the coordination of their respective commercial strategies in violation of art. 101 TFEU.

The alleged coordination, according to AGCM, would have been carried out through the execution of the obligations introduced by Article 19 quinquiesdecies of Legislative Decree no. 148/2017 (converted by Law no. 172/2017) which requires operators of electronic communication services to provide monthly (or more than once a month) invoicing and renewal of the offers for fixed and mobile services. The deadline for the closing of the proceedings is set for March 31, 2019.

On March 21, 2018, AGCM issued a provisional precautionary measure against all the operators involved in the proceedings with which it ordered the suspension, pending the proceedings, of the implementation of the agreement concerning the determination of repricing communicated to users at the time of reformulating the billing cycle in compliance with Law 172/17 and to independently redetermine its commercial strategy. The order with which AGCM confirmed the precautionary measure was published on April 13, 2018.

On June 12, 2018 TIM filed an appeal with the TAR requesting that the AGCM precautionary measure 27112 dated April 11, 2018 be set aside. In its session on June 27, 2018, AGCM took note of the brief submitted by TIM regarding compliance with the precautionary measure.

AGCM, in its session on March 12, 2019 decided to postpone the closing date of the proceeding, initially set on March 31, 2019, to July 31, 2019.

Vodafone Dispute—Universal Service

In a decision published in July 2015, the Council of State rejected the appeal lodged by AGCom and TIM against the judgment of the Lazio Administrative Court (TAR) on the financing of the universal service obligations for the

period 1999–2003. With this judgment the judge had granted the appeals by Vodafone, annulling AGCom decisions 106, 107, 109/11/CONS on the renewal of the related proceedings, which included Vodafone among the subjects required to contribute, for a sum of approximately 38 million euros. Essentially, the judgment confirms that the Authority has not demonstrated the particular degree of "replaceability" between fixed and mobile telephony for mobile operators to be included among the subjects required to repay the cost of the universal service, which means that AGCom needs to issue a new ruling.

TIM has filed an application with AGCom to renew the proceedings, and an appeal against the judgment of the Court of Appeal to the Court of Cassation (which subsequently ruled that the appeal was inadmissible).

In April 2016 Vodafone appealed against the Ministry of Economic Development (MISE) and TIM to the Council of State, for non-compliance with the judgment of the Council of State. This appeal referred to AGCom decision 109/11/CONS (2003 yearly payment, on the basis of which Vodafone had paid the sum of approximately 9 million euros as contribution, restitution of which was requested).

In its judgment of November 2016, the Council of State rejected the appeal, referring to the Regional Administrative Court (TAR) the decision on the methods of compliance. In February 2017, Vodafone presented the Lazio Regional Administrative Court with four new appeals against the Ministry of Economic Development and TIM regarding observance of the ruling, upheld on appeal, countermanding the resolutions for the years 1999–2003 and repayment of the amounts of around 38 million euros already paid to the Ministry of Economic Development as a contribution.

In its June 2018 judgment, the TAR rejected all of Vodafone's appeals, and, as requested by TIM, expressly affirmed that AGCom must renew the proceedings, particularly with regard to the determination of the degree of replaceability between fixed and mobile telephony. Vodafone has appealed the four judgments to the Council of State.

Dispute on "Adjustments to license fees" for the years 1994–1998

With respect to the judgments sought in previous years concerning the Ministry of Communications' request for payment of the balance of the amounts paid in concession charges for the years 1994-1998 (for a total of 113 million euros), the Administrative Court (TAR) for Lazio rejected the Company's appeal against the request for adjustment of the license fee for 1994 in the amount of approximately 11 million euros, 9 million euros of which against turnover not received due to bad debts. TIM lodged an appeal.

With two further judgments the Administrative Court (TAR) for Lazio, reiterating the reasons expressed previously, also rejected the appeals in which the Company challenged the requests for payment of outstanding balances of license fees for the years 1995 and 1996-1997-1998, in the amount of approximately 46 million euros. TIM has appealed before the Council of State also against these judgments.

With regard to a portion of the 1998 fee adjustment (approximately 41 million), the Lazio TAR, by order of December 2018, suspended the judgment, raising preliminary questions with the EU Court of Justice on the correct scope of EC Directive n. 97/13 (in the matter of general authorizations and individual licenses in the field of telecommunications services on the basis of the currently pending litigation on the 1998 license fee and illustrated in a subsequent paragraph). The referred questions are based, inter alia, on the question posed to the Court of Justice on the possible conflict between the aforementioned EC Directive 97/13 and national law, which extended the obligation for telecommunications license-holders to pay the license fee for 1998 (commensurate with a portion of turnover), despite the liberalization process underway.

Olivetti—Asbestos exposure

In September 2014 the Ivrea Public Prosecutor's Office closed the investigations into the alleged exposure to asbestos of 15 former employees of the company "Ing. C. Olivetti S.p.A." (now TIM S.p.A.), "Olivetti Controllo Numerico S.p.A", "Olivetti Peripheral Equipment S.p.A.", "Sixtel S.p.A." and "Olteco S.p.A" and served notice that the investigations had been concluded on the 39 people investigated (who include former Directors of the aforementioned companies).

On December 2014 the Ivrea Public Prosecutor's Office formulated a request for 33 of the 39 people originally investigated to be committed for trial, and at the same time asked that 6 investigations be archived.

During the preliminary hearing, which started in April 2015, TIM assumed the role of civilly liable party, after being formally summonsed by all 26 civil parties (institutions and natural persons) joined in the proceedings. At the end of the preliminary hearing, 18 of the original 33 persons accused were committed for trial. The trial started in November 2015, and, as the party liable for damages, the Company has reached a settlement agreement with 12 of the 18 individuals (heirs/injured persons/family members) who are civil parties to the dispute and they have, therefore, withdrawn the claim for damages against TIM.

In the judgment of first instance, in July 2016, 13 of the 18 defendants were found guilty, with sentences ranging from 1 year to 5 years of imprisonment: four of the defendants were found not guilty, and one case was dismissed for health reasons. The defendants were also sentenced to pay compensation, jointly and severally with the party liable for damages TIM, of an overall sum of approximately 1.9 million euros as a provisional payment to INAIL and 6 heirs who were not part of the settlement. A generic judgment to pay compensation for damages to the remaining damaged parties (entities/unions/associations) was issued, although they must in any case ask the civil court to quantify the damages.

The Company has challenged the reasons for the first instance ruling and the proceedings are now pending before the Court of Appeal of Turin. The Company also signed settlement agreements with the last 6 heirs that were civil party, reaching settlements with all the heirs and family members who had been civil parties in the criminal proceedings. The only civil parties to the appeal were organizations and associations.

In April 2018, the Turin Appeal Court, overturning the judgment of the Court of the first instance, found all the accused not guilty "because there was no case to answer for all the charges". In its considerations, filed in October 2018, the Court recognized that there was no causal link between the individual behavior of the accused persons and the death of the former workers. The Public Prosecutor's Office at the Turin Appeal Court appealed to the Court of Cassation against this judgment based on a number of grounds, and requested the Joint Chambers provide clarification regarding the principles to apply in assessing the causal link.

POSTE

Litigation is still pending for lawsuits brought at the end of the 1990s by Ing. C. Olivetti & C. S.p.A. (now TIM) against Poste for the non-payment of services provided under a series of supply agreements for IT goods and services. The judgments handed down on first instance ruled partially in favor of the former Olivetti, but were challenged by Poste in individual appeals.

In 2009, the Rome Court of Appeal confirmed one of the credit claims of TIM, however in another judgment the same Court declared one of the disputed agreements null and void. Following that judgment, Poste served a writ of execution for the reimbursement of approximately 58 million euros, which TIM rejected given that its appeal against the judgment was still pending before the Supreme Court of Cassation.

In 2012, the Italian Supreme Court of Cassation overturned the Appeal Court ruling on which the writ of execution was based, after which the Rome Court ruled that the enforcement procedure was devoid of purpose as there was no longer any basis for the writ of execution obtained by Poste. The case has been reinstated before another section of the Rome Court of Appeal. In a recent ruling, published on January 25, 2019, the Rome Court of Appeal at the time of proceedings, reversed the Company's previously unfavorable appeal, confirming the contract's validity and, with it, the legitimacy of TIM's view of the amount already collected, of which Poste had requested reimbursement.

Elinet S.p.A. Bankruptcy

The receivers of collapsed Elinet S.p.A., and subsequently the receivers of Elitel S.r.l. and Elitel Telecom S.p.A (the controller of the Elitel group at the time), have appealed in 2014 the judgment with which the Rome Court rejected the claims for compensation made by the receivers of Elinet-Elitel, reproposing a claim for damages totaling 282 million euros. The claims made involve the alleged performance of management and coordination

activities of the plaintiff, and with it the Elitel group (alternative operator in which TIM has never had any type of interest), allegedly enacted by playing the card of trade receivables management. TIM filed an appearance, challenging the claims made by the other party.

Brazil—Opportunity Arbitration

In May 2012, TIM and Telecom Italia International N.V. (now merged in Telecom Italia Finance) were served with a notice of arbitration proceedings brought by the Opportunity group, claiming compensation for damages allegedly suffered for presumed breach of a settlement agreement signed in 2005. Based on the claimant's allegations, the damages relate to circumstances that emerged in the criminal proceedings pending before the Milan Court regarding, inter alia, unlawful activities engaged in by former employees of TIM.

The investigatory phase having been completed, the hearing for oral discussion took place in November 2014, after which the parties filed their concluding arguments in preparation for the decision on the case.

In September 2015, the Board of Arbitration declared the proceedings closed, as the award was going to be filed.

Subsequently, the Board of Arbitration allowed the parties to exchange short arguments and the International Chamber of Commerce (ICC) Court extended the term for the filing of the award.

In September 2016 the ICC Court notified the parties of its judgment, based on which the Board of Arbitration rejected all the claims made by the Opportunity group and decided that the legal costs, administrative costs and costs for expert witnesses should be split between the parties.

In April 2017 the Opportunity group filed an appeal against the arbitration award before the Paris Court of Appeal. In November 2017, TIM and Telecom Italia Finance received from the Secretariat of the ICC's International Court of Arbitration notice of a Request for Revision of the arbitration award, filed by the Opportunity group, asking for a new ruling. A Board of Arbitration was subsequently established.

In October 2018, TIM and Telecom Italia Finance requested proceedings with the Paris Court of Appeal to be suspended, in the light of proceedings pending with the ICC Board of Arbitration to review the same arbitration award. In November 2018, the Paris Court of Appeal suspended the proceedings until a decision is made by the Board of Arbitration in the review proceedings.

Brazil—CAM JVCO Arbitration

In September 2015, JVCO Participações Ltda filed a request for arbitration before the Camara de Arbitragem do Mercado (CAM), based in Rio de Janeiro, against TIM, Telecom Italia International, (today merged into Telecom Italia Finance-TIF), Tim Brasil Serviços e Participações S.A. and Tim Participações S.A., claiming compensation for damages due to an alleged abuse of controlling power over TIM Participações. The following October, all the summoned companies entered appearances and filed statements of defense, and Tim Participações, by way of a counter-claim, called for the condemnation of JVCO for abuse of its position as minority shareholder.

A Board of Arbitration was subsequently established, and in May 2016 there was a preliminary hearing, at which the Terms of Reference were signed. After the hearing, the Board of Arbitration issued a procedural order accepting the Group's request for a preliminary examination of the issue of whether JVCO were entitled to bring proceedings and establishing a provisional schedule for the arbitration. In June the parties exchanged briefs and in their defense TIM, Telecom Italia International, Tim Brasil Serviços e Participações S.A. and Tim Participações S.A. contested the other party' entitlement to bring proceedings and the standing to be sued of Tim Participações, and disputed that there was any abuse of power. In July 2016, the parties filed their responses. On October 19, 2016 the Board of Arbitration issued a procedural order on the preliminary issue of the capacity of the parties to appear in court, upholding the right of JVCO to bring the claim and the standing to be sued of Tim Participações, and fixing the timetable for subsequent replies by the parties. On November 21 and December 19, 2016 the parties filed further replies. On January 31, 2017, the Board of Arbitration issued a procedural order, ruling on trial questions, summarizing the principal disputed questions in the proceedings and making provision in relation to the preliminary investigation. The parties then indicated the evidence they intend to submit in court. Subsequently the Board of Arbitration fixed the dates for the hearings.

The hearings took place in Rio De Janeiro in June 2017, and were followed by further filings of documentation and pleadings. In March 2018, all the parties to the proceedings filed their final briefs.

On July 23, 2018, the Board of Arbitration issued its final award in which it rejected all requests of JVCO and the counterclaim made by Tim Participações to obtain the condemnation of JVCO for abuse of its position as minority shareholder. It also ordered JVCO to pay 90% of arbitration costs (with TIM, TIF, Tim Brasil Serviços e Participações S.A. and Tim Participações S.A. paying the remaining 10%), and the parties to pay some legal costs directly to the lawyers of the counterparties.

Alfiere S.p.A.—TIM-CDP Immobiliare arbitrations

Alfiere S.p.A. (Alfiere) is a company that is owned equally by TIM and CDP Immobiliare S.r.l. (CDPI), which owns the property complex named "Torri dell'Eur". It was intended that this property would house the offices of TIM's General Administration department, after restructuring works and the conclusion of a rental contract. After issues arose relating to the cancellation of the building permit, there was a lengthy dispute before the administrative court, which in the appeal recently confirmed that Alfiere is not required to pay Roma Capitale the sum of 24 million euros by way of concession fee and rejected the damages claim for approximately 300 million euros put forward by the Company against Roma Capitale after the building permit was revoked. To this regard, arbitration proceedings have also started, with TIM making two applications for arbitration of its dispute with CDPI before the arbitration chamber of the Rome Chamber of Commerce. These disputes seek: (i) to determine that CDPI was obliged to indemnify (TIM) in relation to the extraordinary contribution of 24 million euros that local authority Roma Capitale had requested from Alfiere; and (ii) to determine that TIM had no obligation to pay rent for the premises, due to the fact that the property was not handed over by December 31, 2017. As part of this second arbitration case, CDPI has, by way of counterclaim, requested that all the contracts stipulated with TIM in relation to Alfiere be canceled, and TIM ordered to pay compensation for the related damages, quantified as over 88 million euros. In May 2018 the Board of Arbitration combined the aforementioned cases.

With the award granted on December 18, 2018, in accepting TIM's requests and fully rejecting those of CDPI, the Board of Arbitration established CDPI's obligation to indemnify TIM as regards the claims made by the Municipality of Rome by way of extraordinary fee, and affirmed non-existence of TIM's obligation to pay rent for the aforestated real estate complex.

B) OTHER INFORMATION

Mobile telephony—criminal proceedings

In March 2012 TIM was served notice of the conclusion of the preliminary enquiries, which showed that the Company was being investigated by the Public Prosecutor of Milan pursuant to the Legislative Decree n. 231/2001, for the offences of handling stolen goods and counterfeiting committed, according to the alleged allegations, by fourteen employees of the so-called "ethnic channel", with the participation of a number of dealers, for the purpose of obtaining undeserved commissions from TIM.

The Company, as the injured party damaged by such conduct, had brought two legal actions in 2008 and 2009 and had proceeded to suspend the employees involved in the criminal proceedings (suspension later followed by dismissal). It has also filed an initial statement of defense, together with a technical report by its own expert, requesting that the proceedings against it be suspended, and that charges of aggravated fraud against the Company be brought against the other defendants. In December 2012, the Public Prosecutor's Office filed a request for 89 defendants and the Company itself to be committed for trial.

During the preliminary hearing, the Company was admitted as civil party to the trial and, in November 2013, the conclusions in the interest of the civil party were filed, reaffirming TIM's total lack of involvement in the offences claimed.

At the end of the preliminary hearing, which took place in March 2014, the Judge for the Preliminary Hearing committed for trial all the defendants (including TIM) who had not asked for their situation to be settled with alternative procedures, on the grounds that "examination in a trial" was needed. In April 2016, at the end of the first part of the trial, the Public Prosecutor asked for TIM to be sentenced to pay an administrative fine of

900 thousand euros, but decided not to ask for confiscation of any of the presumed profits of the offences (quantified in the committal proceedings as totaling several million euros), based on the assumption that TIM had in any event remedied the presumed organizational inadequacies. While acknowledging the considerable redimensioning of the accusations, the Company has reiterated its total non-involvement in the facts at issue. In November 2016 the Court gave a verdict acquitting the Company on the grounds that there was no case to answer. All the individuals charged were also acquitted on various grounds. The acquittal judgment is not final, as it was challenged in April 2017 by the Public Prosecutor who sought appeal before the Court of Cassation.

The Public Prosecutor appealed the acquittal and appealed to the Court of Cassation *per saltum*. In January 2019, the Italian Supreme Court of Cassation agreed to the appeal and ordered that the deeds be sent to the Milan Court of Appeal.

Dispute concerning the license fees for 1998

TIM has issued civil proceedings against the Presidenza del Consiglio dei Ministri (the office of the Prime Minister) for compensation of the damage caused by the Italian State through appeal judgment no. 7506/09 by the Council of State that, in the view of the Company, violates the principles of current European community law.

The main claim which the proceedings are founded on is based on community jurisprudence that recognizes the right to assert the responsibility of the State in relation to violation of rights recognized in community law and injured by a judgment that has become definitive, in respect of which no other remedy may be applied. The judgment of the Council of State definitively denied the right of TIM to restitution of the concession charge for 1998 (totaling 386 million euros for Telecom Italia and 143 million euros for the former TIM Company, plus interest), already denied by the Lazio regional administrative court despite the favorable and binding opinion of the European Court of Justice in February 2008 concerning the conflict between EC Directive 97/13 on general authorizations and individual licenses in the telecommunications services industry, and the national regulations that had deferred, for 1998, the obligation to pay the fee payable by telecommunications concession holders, despite the intervening deregulation process. The Company then proposed an alternative compensation claim, within the sphere of the same proceedings, for tort pursuant to art. 2043 of the Italian Civil Code. The compensation claimed has been quantified as approximately 529 million euros, plus legal interest and revaluation. The Avvocatura di Stato filed an appearance and submitted a counterclaim for the same sum. The case is subject to eligibility analysis by the Court, which declared the inadmissibility of TIM's main claim (case for damages for manifest breach of community law pursuant to law 117/88). However, this decision was amended in favor of the Company on appeal. In March 2015 the Rome Court issued its judgment in the first instance, declaring the Company's application inadmissible. TIM has appealed the decision, and the case is now pending the hearing specifying the nature of the forms of order sought.

Vodafone (previously TELETU)

There is a pending litigation for compensation started by TIM with a summons dated February 2012 against the operator TELETU (now incorporated into Vodafone) for unlawful refusals regarding reactivation with TIM of the competitor's customers. The claim was quantified as approximately 93 million euros.

Other liabilities connected with the disposal of assets and investments

Within the scope of agreements for the sale of assets and companies, the TIM Group committed to indemnifying the purchasers in the event of liabilities mainly arising in connection with issues of a legal, tax, social security or labor law nature, at an amount normally set as a percentage of the purchase price.

The contingent liabilities in question amount to approximately 500 million euros. Accordingly, a total of approximately 20 million euros in provisions for risks were allocated to cover only those cases considered likely to result in the payment of an indemnity.

In relation to other sales of assets and investments, the TIM Group committed to the payment of other indemnities relating to specific contractual provisions. The contingent liability connected with such indemnities cannot be presently determined.

C) COMMITMENTS AND GUARANTEES

Guarantees, net of back-to-back guarantees received, amounted to 33 million euros.

The guarantees provided by third parties for Group company obligations, amounting to 6,979 million euros, refer to guarantee financing from banks and other financial institutions consisting of guarantees for loans received (1,255 million euros) and performance guarantees under outstanding contracts (5,724 million euros).

In particular, we report:

- The TIM Group issued six guarantees to the Ministry of Economic Development for a total of 1,922 million euros for the deferment of the payment of the amount due for the acquisition of the user rights to frequencies in the 694-790 MHz, 3600-3800 MHz and 26.5-27.5 GHz bands, which will be reserved for 5G mobile telecommunications services.
- The insurance guarantees of 739 million euros, which include guarantee financing by the TIM Group in applying legal provisions for contracts of Public Administrations and similar bodies.

In May 2018, as disclosed above, TIM issued a surety to the Prime Minister's Office for 74.3 million euros to secure an appeal to the Lazio Administration Court for a provisional stay of the administrative fine levied on TIM following the preliminary investigation connected with the penalty proceeding initiated under the Golden Power rule.

Main guarantees for loans at December 31, 2018

Issuer	Amount (millions of euros) (1)
SACE	368
BBVA—Banco Bilbao Vizcaya Argentaria	210
Cassa Depositi e Prestiti	158
Intesa Sanpaolo	115
Ing	105
Unicredit	105
Commerzbank	57
Banco Santander	52
Sumitomo Mitsui Banking	52

1) The amounts shown in the table relate to loans issued by the EIB for the TIM Broadband Digital Divide, TIM Ricerca & Sviluppo Banda Larga, TIM Rete Mobile a Banda Larga, and TIM RDI for Broadband Services projects.

It is noted that:

- the guarantee totaling 105 million euros of ING relating to the loan granted by the EIB for the TIM Broadband Research and Development Project, paid back upon maturity for 100 million euros, is valid for 6 months following repayment (i.e., until March 30, 2019), as set forth in the contract to protect against clawback risk;
- the guarantees amounting to 52 million euros of Santander, 52 million euros of Sumitomo and 105 million euros of SACE relating to the loan granted by the EIB for the TIM Broadband/B-C-D Research and Development Project, paid back upon maturity for 200 million euros, are valid for 6 months following repayment (i.e., until April 12, 2019), as set forth in the contract to protect against clawback risk;
- the guarantees amounting to 210 million euros of BBVA-Banco Bilbao Vizcaya Argentaria and 105 million euros of Unicredit relating to the loan granted by the EIB for the TIM Broadband Digital Divide/C-D Research and Development Project, paid back upon maturity for 300 million euros, are still valid for 6 months following repayment (i.e., until June 20, 2019), as set forth in the contract to protect against clawback risk.

There are also surety bonds on the telecommunication services in Brazil for 244 million euros.

D) ASSETS PLEDGED TO GUARANTEE FINANCIAL LIABILITIES

The contracts for low-rate loans granted by the Brazilian Development Bank BNDES (Banco Nacional de Desenvolvimento Econômico e Social) to Tim Celular, now merged with TIM S.A., for a total equivalent amount of 267 million euros are covered by specific covenants. In the event of non-compliance with these covenants, BNDES will have the right to seek recourse to the collections that pass through the company's current accounts.

NOTE 25—REVENUES

Revenues amounted to 18,940 million euros in 2018, 19,828 million euros in 2017 and 19,025 million euros in 2016, decreased by 888 million euros from 2017 to 2018 compared to a increase by 803 million euros from 2016 to 2017.

Details are as follows:

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Equipment sales	1,538	1,560	1,378
Services	17,379	18,264	17,655
Revenues on construction contracts	23	4	(8)
Total	**18,940**	**19,828**	**19,025**

Revenues from telecommunications services are presented gross of amounts due to other TLC operators, equal to 1,616 million euros (1,737 million euros in 2017), included in Costs of services.

Revenues from services in 2018 include revenues for voice and data services on fixed and mobile networks for retail customers for 10,920 million euros and for other wholesale operators for 3,063 million euros.

Please note that in 2018, in applying IFRS 15, the Parent recognized a significant financial component in the offerings contemplating a time extension between fulfillment of the performance obligation and collection by the customer (''installment sales''); as a result, it reduced related revenues for a total amount of about 60 million euros.

For a breakdown of revenues by operating segment/geographical area, reference should be made to the Note ''Segment Reporting''.

NOTE 26—OTHER INCOME

Other income amounted to 341 million euros in 2018, 523 million euros in 2017 and 311 million euros in 2016, decreased by 182 million euros from 2017 to 2018 compared to an increasing by 212 million euros from 2016 to 2017.

Details are as follows:

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Late payment fees charged for telephone services	60	59	60
Recovery of employee benefit expenses, purchases and services rendered	27	22	33
Capital and operating grants	39	51	36
Damages, penalties and recoveries connected with litigation	29	40	24
Partnership agreements and other arrangements with suppliers	22	129	71
Estimate revisions and other adjustments	73	188	
Other income	91	34	87
Total	**341**	**523**	**311**

They include, *inter alia*:

- contribution fees resulting from partnership and other agreements with leading counterparties, designed to develop the collaboration between the parties, in order to strengthen and stabilize industrial, commercial and real estate relations over time;
- 37 million euros connected to the Brazil Business Unit tax recovery following the favorable outcome of the tax dispute relative to the unconstitutional grounds of the law that entailed the inclusion of ICMS indirect tax in the base for calculating taxes on PIS and COFINS revenues.

NOTE 27—ACQUISITION OF GOODS AND SERVICES

Acquisition of goods and services amounted to 8,186 million euros in 2018, 8,388 million euros in 2017 and 7,793 million euros in 2016, decreasing by 202 million euros from 2017 to 2018 compared to a increasing by 595 million euros from 2016 to 2017.

Details are as follows:

		Year ended December 31,		
		2018	2017	2016
		(millions of euros)		
Acquisition of raw materials and merchandise	**(A)**	**1,957**	**1,863**	**1,614**
Costs of services:				
Revenues due to other TLC operators		1,616	1,737	1,686
Costs for access services to Tlc networks		171	217	244
Commissions, sales commissions and other selling expenses		1,158	1,109	937
Advertising and promotion expenses		236	277	294
Professional and consulting services		242	223	186
Utilities		417	467	484
Maintenance		221	240	287
Outsourcing costs for other services		465	513	447
Mailing and delivery expenses for telephone bills, directories and other materials to customers		84	96	98
Other service expenses		634	664	609
	(B)	**5,244**	**5,543**	**5,272**
Lease and rental costs:				
Rent and leases		607	645	616
TLC circuit lease rents		126	119	82
Other lease and rental costs		252	218	209
	(C)	**985**	**982**	**907**
Total	**(A+B+C)**	**8,186**	**8,388**	**7,793**

During 2018, in connection with the analyses and examinations preparatory for applying the new IFRS 16 standard, the TLC circuit rents, the rents for use of satellite systems—when considered costs of services—and the services component of the lease of real estate and Base Transceiver Stations were reclassified from "Lease and rental costs" to "Costs of services" in order to better represent the nature of these costs.

So that the data can be more easily compared, the reclassification was also made on the 2017 data (for a total amount of 279 million euros), and on the 2016 data (for a total amount of 301 million euros).

NOTE 28—EMPLOYEE BENEFITS EXPENSES

Employee benefits expenses amounted to 3,105 million euros in 2018, 3,626 million euros in 2017 and 3,106 million euros in 2016, decreasing by 521 million euros from 2017 to 2018 compared to a increasing by 520 million euros from 2016 to 2017.

Details are as follows:

		Year ended December 31,		
		2018	2017	2016
		(millions of euros)		
Employee benefits expenses				
Wages and salaries		1,994	2,056	2,116
Social security expenses		738	745	770
Other employee benefits		144	110	37
	(A)	**2,876**	**2,911**	**2,923**
Costs and provisions for temp work	**(B)**	**—**	**—**	**—**
Miscellaneous expenses for personnel and other labor-related services rendered:				
Charges for termination benefit incentives		8	28	10
Corporate restructuring expenses		216	680	156
Other		5	7	17
	(C)	**229**	**715**	**183**
Total	**(A+B+C)**	**3,105**	**3,626**	**3,106**

Employee benefits expenses mainly related to the Domestic Business Unit for 2,781 million euros (3,266 million euros in 2017) and to the Brazil Business Unit for 317 million euros (353 million euros in 2017).

"Restructuring expenses" amounted to 216 million euros; Specifically, a plan was launched at the end of 2017 for executive and non-executive staff to adopt, among others, Article 4(1–7-ter) of Law 92 of June 28, 2012 (the "Fornero Law", which provides for early retirement arrangements). During 2018, Plan take-up was greater than initially forecast, therefore estimates for staff leaving in 2019-2020 were revised, also taking into account the social security changes made by Decree Law 4 January 28, 2019. Expenses totaling 680 million euros were recognized in 2017.

The average salaried workforce, including personnel with temp work contracts, stood at 54,423 employees in 2018 (54,946 in 2017). A breakdown by category is as follows:

	Year ended December 31,		
	2018	2017	2016
	(Full time equivalent units)		
Executives	646	707	837
Middle management	4,271	4,269	4,450
White collars	49,505	49,967	52,563
Blue collars	1	1	1
Employees on payroll	**54,423**	**54,944**	**57,851**
Employees with temp work contracts		**2**	**4**
Total average headcount of salaried workforce	**54,423**	**54,946**	**57,855**

Headcount in service at December 31, 2018, including personnel with temp work contracts, stood at 57,901 employees (59,429 at December 31, 2017), showing a decrease of 1,528 employees.

NOTE 29—OTHER OPERATING EXPENSES

Other operating expenses amounted to 1,259 million euros in 2018, 1,208 million euros in 2017 and 1,083 million euros in 2016, increasing by 51 million euros from 2017 to 2018, compared to an increasing by 125 million euros from 2016 to 2017.

Details are as follows:

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Write-downs and expenses in connection with credit management	518	400	335
Provision charges	189	228	144
TLC operating fees and charges	286	356	373
Indirect duties and taxes	125	111	100
Penalties, settlement compensation and administrative fines	73	33	44
Association dues and fees, donations, scholarships and traineeships	12	15	18
Sundry expenses	56	65	69
Total	**1,259**	**1,208**	**1,083**
of which, included in the supplementary disclosure on financial instruments	*518*	*400*	*335*

This item includes, inter alia, higher provision charges for bad debts (+10 million euros) compared to 2017, mainly attributable to difficulties and delays in the receipts of some South American and Mediterranean Basin operators.

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

NOTE 30—INTERNALLY GENERATED ASSETS

Internally generated assets amounted to 570 million euros in 2018, 626 million euros in 2017, and 639 million euros in 2016, decreasing by 56 million euros from 2017 to 2018 compared to a decreasing by 13 million euros from 2016 to 2017.

Details are as follows:

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Intangible assets with a finite useful life	248	272	289
Tangible assets owned	322	354	350
Total	**570**	**626**	**639**

Internally generated assets mainly include labor costs of dedicated technical staff for software development and the development of network solutions, applications and innovative services as well as work in connection with the design, construction and testing of network installations.

NOTE 31—DEPRECIATION AND AMORTIZATION

Depreciation and amortization amounted to 4,255 million euros in 2018, 4,473 million euros in 2017, and 4,291 million euros in 2016, decreased by 218 million euros from 2017 to 2018 compared to an increasing by 182 million euros from 2016 to 2017.

Details are as follows:

		Year ended December 31,		
		2018	2017	2016
		(millions of euros)		
Amortization of intangible assets with a finite useful life:				
Industrial patents and intellectual property rights		1,171	1,263	1,243
Concessions, licenses, trademarks and similar rights		422	396	393
Other intangible assets		6	134	107
	(A)	**1,599**	**1,793**	**1,743**
Depreciation of tangible assets owned:				
Buildings (civil and industrial)		36	39	48
Plant and equipment		2,229	2,286	2,170
Manufacturing and distribution equipment		14	16	15
Other		162	159	157
	(B)	**2,441**	**2,500**	**2,390**
Depreciation of tangible assets held under finance leases:				
Buildings (civil and industrial)		159	130	125
Plant and equipment		18	21	17
Other		38	29	16
	(C)	**215**	**180**	**158**
Total	**(A+B+C)**	**4,255**	**4,473**	**4,291**

Further details are provided in the Notes "Intangible assets with a finite useful life" and "Tangible assets (owned and under finance leases)".

For a breakdown of depreciation and amortization by operating segment/geographical area, reference should be made to the Note "Segment Reporting".

NOTE 32—GAINS (LOSSES) ON DISPOSALS OF NON—CURRENT ASSETS

Gains (losses) on disposals of non—current assets amounted to a loss of 1 million euros in 2018, a gain of 11 million euros in 2017 and a gain of 14 million euros in 2016.

Details are as follows:

		Year ended December 31,		
		2018	2017	2016
		(millions of euros)		
Gains on disposals of non-current assets:				
Gains on the retirement/disposal of intangible and tangible assets		13	15	28
Gains on the disposal of investments in subsidiaries		—	—	—
	(A)	**13**	**15**	**28**
Losses on disposals of non-current assets:				
Losses on the retirement/disposal of intangible and tangible assets		14	4	14
Losses on the disposals of investments in subsidiaries		—	—	—
	(B)	**14**	**4**	**14**
Total	**(A—B)**	**(1)**	**11**	**14**

In 2018 this item was negative for 1 million euros while in 2017 it was positive (11 million euros), connected with the ordinary asset renewal process.

In 2017, gains on disposals of non-current assets were connected with the ordinary asset renewal process.

In 2016, gains on disposals of non-current assets were 14 million euros and included a gain of 44 million reais (approximately 12 million euros at the 2016 average exchange rate) realized by the Brazil Business Unit from the sale of two further tranches of telecommunications towers to American Tower do Brasil.

NOTE 33—IMPAIRMENT REVERSALS (LOSSES) ON NON—CURRENT ASSETS

Impairment losses on non-current assets, amounted to 2,586 million euros in 2018, 37 million euros in 2017, and 3 million euros in 2016.

Details are as follows:

		Year ended December 31,		
		2018	2017	2016
		(millions of euros)		
Reversals of impairment losses on non-current assets:				
on intangible assets		4	—	—
on tangible assets		—	—	—
	(A)	4	—	—
Impairment losses on non-current assets:				
on intangible assets		2,590	30	—
on tangible assets		—	7	3
	(B)	2,590	37	3
Total	(A-B)	(2,586)	(37)	(3)

Impairment losses for 2018 amounted to 2,590 million euros and mainly refer to the goodwill impairment loss attributable to the Core Domestic unit and International Wholesale.

In accordance with IAS 36, goodwill is not subject to amortization, but is tested for *impairment* on at least an annual basis, when preparing the company's consolidated financial statements. At September 30, 2018, with reference to the Core Domestic *Cash-Generating Unit*, internal and external events and circumstances had arisen that led the company to carry out *impairment testing* on the CGU, with a recognition of an Impairment loss relative to the Core Domestic Unit for an amount of 2,000 million euros.

In the 2018 Financial Statements, the annual impairment test resulted in an additional impairment loss of 450 million euros on the goodwill attributed to the Core Domestic *Cash-Generating Unit*—therefore the total impairment loss for the financial year 2018 amounted to 2,450 million euros—as well as an impairment loss of 140 million euros on the goodwill attributed to the International Wholesale *Cash-Generating Unit*.

With reference to the Brazil *Cash Generating Units*, the Impairment test exercise did not show any impairment losses to the Goodwill allocated to the said CGUs.

Reversals totaled 4 million euros following an update by the Parent of the assessment of some construction contracts subject to prior impairment.

A more detailed analysis is provided in the Note "Goodwill".

Write-downs in 2017 totaled 37 million euros and were mainly represented by write-downs of intangible assets.

In 2016, impairment losses on non-current assets amounted to 3 million euros and were related to the redetermination of the value of several minor assets.

NOTE 34—OTHER INCOME (EXPENSES) FROM INVESTMENTS

Other income (expenses) from investments reflected an income of 11 million euros, an expense of 18 million euros in 2017, and an income of 7 million euros in 2016.

Details are as follows:

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Dividends from Other investments	11	1	7
Net gains on disposals of Other investments	—	—	—
Loss and impairment losses on Other investments	—	(19)	—
Total	**11**	**(18)**	**7**

In 2018, this item showed a positive figure of 11 million euros and mainly included the dividends paid to TIM S.p.A. by the company Emittenti Titoli.

In 2017, this item amounted to an expense of 18 million euros and essentially included the allocation to the income statement of the Reserve for exchange differences on translating foreign operations for the investee company Tierra Argentea S.A., the liquidation of which was completed that year.

In 2016, the item showed an income of 7 million euros, including mainly dividends received from Emittenti Titoli S.p.A.

NOTE 35—FINANCE INCOME AND EXPENSES

Finance income (expenses) showed a net expense of 1,348 millions euros in 2018, 1,495 million euros in 2017 and 907 million euros in 2016, and comprises:

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Finance income	1,056	1,808	2,543
Finance expenses	(2,404)	(3,303)	(3,450)
Finance income (expenses), net	**(1,348)**	**(1,495)**	**(907)**

The items break down as follows:

		Year ended December 31,		
		2018	2017	2016
		(millions of euros)		
Interest expenses and other finance expenses:				
Interest expenses and other costs relating to bonds		(1,012)	(1,100)	(1,162)
Interest expenses to banks		(72)	(113)	(117)
Interest expenses to others		(204)	(250)	(246)
Total interest expenses		**(1,288)**	**(1,463)**	**(1,525)**
Commissions		(70)	(91)	(95)
Miscellaneous finance expenses(*)		(232)	(256)	(221)
Total other finance expenses		**(302)**	**(347)**	**(316)**
Interest income and other finance income:				
Interest income		52	129	151
Income from financial receivables recorded in non-current assets		—	—	—
Income from securities other than investments, recorded in non-current assets		—	—	—
Income from securities other than investments, recorded in current assets		11	14	16
Miscellaneous finance income (*)		61	26	37
Total interest income and other finance income		**124**	**169**	**204**
Total net interest / financial charges	**(a)**	**(1,466)**	**(1,641)**	**(1,637)**
Other components of financial income and expense:				
Net exchange gains and losses		(1)	23	246
Net result from derivatives		114	132	114
Net fair value adjustment to fair value hedge derivatives and underlying		(3)	8	—
Net fair value adjustments to non-hedging derivatives		8	(17)	370
Total other components	**(b)**	**118**	**146**	**730**
Total net financial income (expenses)	**(c=a+b)**	**(1,348)**	**(1,495)**	**(907)**
of which, included in the supplementary disclosure on financial instruments		(1,161)	(1,306)	(916)

(*) Of which IFRS 9 impact:

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Income from negative adjustment of IFRS 9 impairment reserve on financial assets measured through FVTOCI	2	—	—
Expenses from positive adjustment of IFRS 9 impairment reserve on financial assets measured through FVTOCI	(12)	—	—
Reversal of IFRS 9 impairment reserve on financial assets measured through FVTOCI	4	—	—
Impairment losses on financial assets other than investments	—	—	—

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

For greater clarity of presentation, the net effects relating to derivative financial instruments are summarized in the following table:

		Year ended December 31,		
		2018	2017	2016
		(millions of euros)		
NET EXCHANGE GAINS AND LOSSES				
Exchange gains		265	782	713
Exchange losses		(266)	(759)	(467)
		(1)	**23**	**246**
NET RESULT FROM DERIVATIVES				
Income from fair value hedge derivatives		41	66	65
Charges from fair value hedge derivatives		—	—	(1)
Net result from fair value hedge derivatives	**(A)**	**41**	**66**	**64**
Positive effect of the Reversal of the Reserve of cash flow hedge derivatives to the income statement for the interest rate component		524	568	649
Negative effect of the Reversal of the Reserve of cash flow hedge derivatives to the income statement for the interest rate component		(446)	(489)	(548)
Net effect of the Reversal of the Reserve of cash flow hedge derivatives to the income statement for the interest rate component	**(B)**	**78**	**79**	**101**
Income from non-hedging derivatives		4	9	13
Charges from non-hedging derivatives		(9)	(22)	(64)
Net result from non-hedging derivatives	**(C)**	**(5)**	**(13)**	**(51)**
Net result from derivatives	**(A+B+C)**	**114**	**132**	**114**
Positive fair value adjustment to fair value hedge derivatives		50	—	50
Negative fair value adjustment to underlying financial assets and liabilities of fair value hedge derivatives		(53)	—	(45)
Net fair value adjustments	**(D)**	**(3)**	**—**	**5**
Positive fair value adjustments to underlying financial assets and liabilities of fair value hedge derivatives		—	95	173
Negative fair value adjustments to fair value hedge derivatives		—	(87)	(178)
Net fair value adjustments	**(E)**	**—**	**8**	**(5)**
Net fair value adjustment to fair value hedge derivatives and underlying	**(D+E)**	**(3)**	**8**	**—**
NET FAIR VALUE ADJUSTMENTS TO NON-HEDGING DERIVATIVES				
Positive fair value adjustments to non-hedging derivatives	**(F)**	**48**	**119**	**676**
Negative fair value adjustments to non-hedging derivatives	**(G)**	**(40)**	**(136)**	**(306)**
Net fair value adjustments to non-hedging derivatives	**(F+G)**	**8**	**(17)**	**370**

NOTE 36—PROFIT (LOSS) FOR THE YEAR

Profits (losses) for the years ended December 31, 2018, 2017 and 2016 are summarized as follows:

	Year ended December 31,		
	2018	2017	2016
	(millions of euros)		
Profit (loss) for the year	**(1,152)**	**1,287**	**1,966**
Attributable to:			
Owners of the Parent			
Profit (loss) from continuing operations	(1,411)	1,121	1,811
Profit (loss) from Discontinued operations/Non-current assets held for sale	—	—	(3)
Profit (loss) for the year attributable to owners of the Parent	**(1,411)**	**1,121**	**1,808**
Non-controlling interests			
Profit (loss) from continuing operations	259	166	108
Profit (loss) from Discontinued operations/Non-current assets held for sale	—	—	50
Profit (loss) for the year attributable to Non-Controlling interests	**259**	**166**	**158**

NOTE 37—EARNINGS PER SHARE

		Year ended December 31,		
		2018	2017	2016
Basic Earnings Per Share				
Profit (loss) for the year attributable to owners of the Parent		(1,411)	1,121	1,808
Less: additional dividends for the savings shares (0.011 per share and up to capacity)		—	(66)	(66)
	(millions of euros)	**(1,411)**	**1,055**	**1,742**
Average number of Ordinary and Savings Shares	(millions)	21,067	21,067	21,067
Basic earnings per share—Ordinary Shares		(0.07)	0.05	0.08
Plus: additional dividends per savings Share		—	0.01	0.01
Basic earnings per share—Savings Shares	(euro)	**(0.07)**	**0.06**	**0.09**
Basic Earnings Per Share From continuing Operations				
Profit (loss) from continuing operations attributable to owners of the Parent		(1,411)	1,121	1,811
Less: additional dividends for the Savings Shares		—	(66)	(66)
	(millions of euros)	**(1,411)**	**1,055**	**1,745**
Average number of Ordinary and Savings Shares	(millions)	**21,067**	**21,067**	**21,067**
Basic earnings (loss) per share from continuing operations—Ordinary Shares		(0.07)	0.05	0.08
Plus: additional dividends per savings Share		—	0.01	0.01
Basic earnings (loss) per share from continuing operations—Savings Shares	(Euro)	**(0.07)**	**0.06**	**0.09**
Basic Earnings Per Share From Discontinued operations/ Non-current assets held for sale				
Profit (loss) from Discontinued operations/Non-current assets held for sale	(millions of euros)	**—**	**—**	**47**
Average number of Ordinary and Savings Shares	(millions)	21,067	21,067	21,067

		Year ended December 31,		
		2018	2017	2016
Basic earnings (loss) per share from Discontinued operations/ Non-current assets held for sale—Ordinary Shares	(euro)	—	—	—
Basic earnings (loss) per share from Discontinued operations/ Non-current assets held for sale—Savings Shares	(euro)	—	—	—

	Year ended December 31,		
	2018	2017	2016
Average number of Ordinary Shares	15,039,368,195	15,039,368,195	15,039,128,128
Average number of Savings Shares	6,027,791,699	6,027,791,699	6,027,791,699
Total	**21,067,159,894**	**21,067,159,894**	**21,066,919,827**

		Year ended December 31,		
		2018	2017	2016
Diluted Earnings Per Share				
Profit (loss) for the year attributable to Owners of the Parent		(1,411)	1,121	1,808
Dilution effect of stock option plans and convertible bonds (*)		40	32	43
Less: additional dividends for the savings shares (0.011 per share and up to capacity)		—	(66)	(66)
	(millions of euros)	**(1,371)**	**1,087**	**1,785**
Average number of Ordinary and Savings Shares	(millions)	22,167	22,167	22,194
Diluted earnings per share—Ordinary Shares		(0.06)	0.05	0.08
Plus: additional dividends per savings Share		—	0.01	0.01
Diluted earnings per share—Savings Shares	(euro)	**(0.06)**	**0.06**	**0.09**
Diluted Earnings Per Share From continuing Operations				
Profit (loss) from continuing operations attributable to owners of the Parent		(1,411)	1,121	1,811
Dilution effect of stock option plans and convertible bonds (*)		40	32	43
Less: additional dividends for the Savings Shares		—	(66)	(66)
	(millions of euros)	**(1,371)**	**1,087**	**1,788**
Average number of Ordinary and Savings Shares	(millions)	**22,167**	**22,167**	**22,194**

		Year ended December 31,		
		2018	2017	2016
Diluted earnings (loss) per share from continuing operations—Ordinary Shares		(0.06)	0.05	0.08
Plus: additional dividends per savings Share		—	0.01	0.01
Diluted earnings (loss) per share from continuing operations—Savings Shares	(euro)	**(0.06)**	**0.06**	**0.09**
Diluted Earnings Per Share From Discontinued operations/ Non-current assets held for sale				
Profit (loss) from Discontinued operations/Non-current assets held for sale	(millions of euros)	—	—	47
Dilution effect of stock option plans and convertible bonds				
Average number of Ordinary and Savings Shares	(millions)	22,167	22,167	22,194
Diluted earnings per share from Discontinued operations/ Non-current assets held for sale—Ordinary Shares	(euro)	—	—	—
Diluted earnings per share from Discontinued operations/ Non-current assets held for sale—Savings Shares	(euro)	—	—	—

	Year ended December 31,		
	2018	2017	2016
Average number of Ordinary Shares (*)	16,139,213,020	16,139,681,521	16,166,142,282
Average number of Savings Shares	6,027,791,699	6,027,791,699	6,027,791,699
Total	**22,167,004,719**	**22,167,473,220**	**22,193,933,981**

* The average number of ordinary shares also includes the potential ordinary shares relating to the equity compensation plans of employees for which the (market and non-market) performance conditions have been met, in addition to the theoretical number of shares that are issuable as a result of the conversion of the unsecured equity-linked convertible bond. Consequently, the "Net profit (loss) for the year attributable to Owners of the Parent and the "Profit (loss) from continuing operations attributable to Owners of the Parent" were also adjusted to exclude the effects, net of tax, related to the above-mentioned plans and to the convertible bond (+40 million euros in 2018; +32 million euros in 2017, and 43 million euros in 2016).

Future potential changes in share capital

The table below shows future potential changes in share capital, based on the issuance of the convertible bond by TIM S.p.A. in March 2015, the authorizations to increase the share capital in place at December 31, 2018, and the options and rights granted under equity compensation plans, still outstanding at December 31, 2018.

	Number of maximum shares issuable	Share capital (thousands of euros)	Additional paid-in capital (thousands of euros)	Subscription price per shares (euros)
Capital increases already approved (ordinary shares)				
2014-2016 Stock Option Plan	133,042	73	80	1.15
	343,069	189	158	1.01
	893,617	492	393	0.99
	13,497,406	7,423	5,264	0.94
Stock Options	**14,867,134**	**8,177**	**5,895**	
2015 Convertible Bond (ordinary shares) (*)	1,082,485,386	2,000,000	n.a.	n.a.
Convertible bonds		**2,000,000**		
Total		**2,008,177**		

(*) The number of shares potentially issuable shown may be subject to adjustments.

Further information is provided in the Notes "Financial liabilities (non-current and current)" and "Equity compensation plans".

NOTE 38—SEGMENT REPORTING

a) Reporting by operating segment

Segment reporting is based on the following operating segments:

- Domestic;
- Brazil;
- Other Operations.

SEPARATE CONSOLIDATED INCOME STATEMENTS BY OPERATING SEGMENT

	Domestic			Brazil			Other operations			Adjustments and eliminations			Consolidated Total		
	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
	(millions of euros)														
Third-party revenues	14,998	15,328	14,971	3,942	4,500	4,044	—	—	10	—	—	—	18,940	19,828	19,025
Intragroup revenues	33	26	35	1	2	3	—	—	1	(34)	(28)	(39)	—	—	—
Revenues by operating segment	**15,031**	**15,354**	**15,006**	**3,943**	**4,502**	**4,047**	**—**	**—**	**11**	**(34)**	**(28)**	**(39)**	**18,940**	**19,828**	**19,025**
Other income	273	471	259	69	52	51	—	—	1	(1)	—	—	341	523	311
Total operating revenues and other income	**15,304**	**15,825**	**15,265**	**4,012**	**4,554**	**4,098**	**—**	**—**	**12**	**(35)**	**(28)**	**(39)**	**19,281**	**20,351**	**19,336**
Acquisition of goods and services	(6,360)	(6,235)	(5,785)	(1,846)	(2,168)	(2,028)	(7)	(4)	(9)	27	19	29	(8,186)	(8,388)	(7,793)
Employee benefits expenses	(2,781)	(3,266)	(2,759)	(317)	(353)	(336)	(6)	(7)	(11)	(1)	—	—	(3,105)	(3,626)	(3,106)
of which: accruals to employee severance indemnities	*(1)*	*(6)*	*(1)*	—	—	—	—	—	—	—	—	—	*(1)*	*(6)*	*(1)*
Other operating expenses	(763)	(704)	(574)	(491)	(500)	(505)	(6)	(5)	(2)	1	1	(2)	(1,259)	(1,208)	(1,083)
of which: write-downs and expenses in connection with credit management and provision charges	*(501)*	*(468)*	*(317)*	*(208)*	*(160)*	*(162)*	—	—	—	*1*	—	—	*(708)*	*(628)*	*(479)*
Change in inventories	88	41	16	14	(6)	1	—	—	(8)	—	—	—	102	35	9
Internally generated assets	467	510	535	95	108	95	—	—	—	8	8	9	570	626	639
Depreciation and amortization	(3,340)	(3,360)	(3,310)	(915)	(1,114)	(980)	—	—	—	—	1	(1)	(4,255)	(4,473)	(4,291)
Gains (losses) on disposals of non-current assets	(13)	(2)	(9)	12	14	23	—	—	—	—	(1)	—	(1)	11	14
Impairment reversals (losses) on non-current assets	(2,586)	(37)	(3)	—	—	—	—	—	—	—	—	—	(2,586)	(37)	(3)
Operating profit (loss)	**16**	**2,772**	**3,376**	**564**	**535**	**368**	**(19)**	**(16)**	**(18)**	**—**	**—**	**(4)**	**561**	**3,291**	**3,722**
Share of losses (profits) of associates and joint ventures accounted for using the equity method	(1)	(1)	(23)	—	—	—	—	—	—	—	—	—	(1)	(1)	(23)
Other income (expenses) from investments													11	(18)	7
Finance income													1,056	1,808	2,543
Finance expenses													(2,404)	(3,303)	(3,450)
Profit (loss) before tax from continuing operations													**(777)**	**1,777**	**2,799**
Income tax expense													(375)	(490)	(880)
Profit (loss) from continuing operations													**(1,152)**	**1,287**	**1,919**
Profit (loss) from Discontinued operations/Non-current assets held for sale													—	—	47
Profit (loss) for the year													**(1,152)**	**1,287**	**1,966**
Attributable to:															
Owners of the Parent													(1,411)	1,121	1,808
Non-controlling interests													259	166	158

REVENUES BY OPERATING SEGMENT

	Domestic			Brazil			Other operations			Adjustments and eliminations			Consolidated Total		
	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
	(millions of euros)														
Revenues from equipment sales—third party	1,358	1,350	1,136	180	210	232	—	—	10	—	—	—	1,538	1,560	1,378
Revenues from equipment sales—intragroup	—	—	—	—	1	—	—	—	1	—	(1)	(1)	—	—	—
Total revenues from equipment sales	**1,358**	**1,350**	**1,136**	**180**	**211**	**232**	**—**	**—**	**11**	**—**	**(1)**	**(1)**	**1,538**	**1,560**	**1,378**
Revenues from services—third party	13,617	13,974	13,843	3,762	4,290	3,812	—	—	—	—	—	—	17,379	18,264	17,655
Revenues from services—intragroup	33	26	35	1	1	3	—	—	—	(34)	(27)	(38)	—	—	—
Total revenues from services	**13,650**	**14,000**	**13,878**	**3,763**	**4,291**	**3,815**	**—**	**—**	**—**	**(34)**	**(27)**	**(38)**	**17,379**	**18,264**	**17,655**
Revenues on construction contracts—third party	23	4	(8)	—	—		—	—		—	—	—	23	4	(8)
Revenues on construction contracts—intragroup	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total revenues on construction contracts	**23**	**4**	**(8)**	**—**	**—**		**—**	**—**		**—**	**—**	**—**	**23**	**4**	**(8)**
Total third-party revenues	14,998	15,328	14,971	3,942	4,500	4,044	—	—	10	—	—	—	18,940	19,828	19,025
Total intragroup revenues	33	26	35	1	2	3	—	—	1	(34)	(28)	(39)	—	—	—
Total revenues by operating segment	**15,031**	**15,354**	**15,006**	**3,943**	**4,502**	**4,047**	**—**	**—**	**11**	**(34)**	**(28)**	**(39)**	**18,940**	**19,828**	**19,025**

PURCHASE OF INTANGIBLE AND TANGIBLE ASSETS BY OPERATING SEGMENT

	Domestic			Brazil			Other operations			Adjustments and eliminations			Consolidated Total		
	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
	(millions of euros)														
Purchase of intangible assets	3,385	1,763	1,113	262	529	528	—	—	—	—	—	—	3,647	2,292	1,641
Purchase of tangible assets	2,194	2,842	2,792	637	635	675	—	—	—	—	—	—	2,831	3,477	3,467
Purchase of intangible and tangible assets	**5,579**	**4,605**	**3,905**	**899**	**1,164**	**1,203**	**—**	**—**	**—**	**—**	**—**	**—**	**6,478**	**5,769**	**5,108**
of which capital expenditures	*5,518*	*4,551*	*3,709*	*890*	*1,150*	*1,167*	—	—	—	—	—	—	*6,408*	*5,701*	*4,876*
of which increases in finance leasing contracts	*61*	*54*	*196*	*9*	*14*	*36*	—	—	—	—	—	—	*70*	*68*	*232*

HEADCOUNT BY OPERATING SEGMENT

	Domestic		Brazil		Other operations		Consolidated Total	
	As of December 31, 2018	As of December 31, 2017	As of December 31, 2018	As of December 31, 2017	As of December 31, 2018	As of December 31, 2017	As of December 31, 2018	As of December 31, 2017
	(number of employees)							
Headcount	48,200	49,851	9,658	9,508	43	70	57,901	59,429

ASSETS AND LIABILITIES BY OPERATING SEGMENT

	Domestic		Brazil		Other operations		Adjustments and eliminations		Consolidated Total	
	As of December 31, 2018	As of December 31, 2017	As of December 31, 2018	As of December 31, 2017	As of December 31, 2018	As of December 31, 2017	As of December 31, 2018	As of December 31, 2017	As of December 31, 2018	As of December 31, 2017
	(millions of euros)									
Non-current operating assets	48,056	48,850	6,037	6,769	3	3	(1)	1	54,095	55,623
Current operating assets	4,233	4,363	874	898	5	(2)	(17)	(10)	5,095	5,249
Total operating assets	**52,289**	**53,213**	**6,911**	**7,667**	**8**	**1**	**(18)**	**(9)**	**59,190**	**60,872**
Investments accounted for using the equity method	16	17	—	—	—	—	—	—	16	17
Discontinued operations /Non-current assets held for sale									—	—
Unallocated assets									6,413	7,894
Total Assets									**65,619**	**68,783**
Total operating liabilities	**10,732**	**9,829**	**1,885**	**1,855**	**48**	**58**	**(69)**	**(26)**	**12,596**	**11,716**
Liabilities directly associated with Discontinued operations/Non-current assets held for sale									—	—
Unallocated liabilities									31,276	33,284
Equity									21,747	23,783
Total Equity and liabilities									**65,619**	**68,783**

b) Reporting by geographical area

		Revenues						Non-current operating assets	
		Breakdown by location of operations			Breakdown by location of customers			Breakdown by location of operations	
		2018	2017	2016	2018	2017	2016	As of December 31, 2018	As of December 31, 2017
		(millions of euros)							
Italy	(A)	14,711	15,015	14,635	13,839	14,064	13,657	47,795	48,591
Outside Italy	(B)	4,229	4,813	4,390	5,101	5,764	5,368	6,300	7,032
Total	**(A+B)**	**18,940**	**19,828**	**19,025**	**18,940**	**19,828**	**19,025**	**54,095**	**55,623**

c) Information about major customers

None of the TIM Group's customers exceeds 10% of consolidated revenues.

NOTE 39—RELATED PARTY TRANSACTIONS AND DIRECTION AND COORDINATION ACTIVITY

The following tables show the figures relating to related party transactions and the impact of those amounts on the separate consolidated income statements, consolidated statements of financial position and consolidated statements of cash flows.

On May 16, 2018, the Board of Directors of TIM S.p.A. acknowledged that the grounds for considering Vivendi the entity exercising direction and coordination powers over TIM no longer applied. Furthermore, on June 25, 2018, the Board of Directors of TIM approved amendments to the internal procedure governing transactions with related parties, and updated the relative related-party boundary to reflect the new situation, whereby Vivendi no longer qualifies as the de facto controlling entity over TIM. The procedure was lastly updated by the Board of Directors with some improvements on July 24, 2018.

Related-party transactions, when not dictated by specific laws, were conducted at arm's length; the transactions were carried out in accordance with the internal procedure that contains the rules aimed at ensure the transaparency and fairness of related party transactions in accordance with Consob Regulation 17221/2010. The current procedure is available on the website www.telecomitalia.com, under the Group section/Governance System channel.

The effects of the related party transactions on the Group separate consolidated income statement line items for 2018 and 2017 are as follows:

The **effects of the related party transactions on the Group separate consolidated income statements** line items for the years 2018, 2017 and 2016 are as follows:

Separate consolidated income statement line items 2018

	Total (a)	Associates, subsidiaries of associates and joint ventures	Other related parties (*)	Pension funds	Key managers	Total related parties (b)	% on line item (b/a)
	(millions of euros)						
Revenues	18,940	2	3			**5**	0.0
Acquisition of goods and services	8,186	5	157			**162**	2.0
Employee benefits expenses	3,105	—	—	78	14	**92**	3.0
Finance income	1,056	—	8			**8**	0.8
Finance expenses	2,404	3	6	—	—	**9**	0.4

(*) Vivendi group and Companies belonging to the group that it belongs to; other related parties through directors, statutory auditors and key managers (or executive officers under US rules) are considered related parties.

Separated consolidated income statement line items 2017

	Total (a)	Associates, subsidiaries of associates and joint ventures	Other related parties (*)	Pension funds	Key managers	Total related parties	% on line item (b/a)
			(millions of euros)				
Revenues	19,828	3	115			118	0.6
Other income	523	4	4			8	1.5
Acquisition of goods and services	8,388	22	170			192	2.3
Employee benefits expenses	3,626		1	74	37	112	3.1
Finance income	1,808		45			45	2.5
Finance expenses	3,303	11	38			49	1.5

(*) Vivendi group and Companies belonging to the group that it belongs to; other related parties through directors, statutory auditors and key managers (or executive officers under US rules) are considered related parties.

Separate consolidated income statement line items 2016

	Total (a)	Associates, subsidiaries of associates and joint ventures	Other related parties (*)	Pension funds	Key managers	Total related parties	Transactions of Discontinued Operations	Total related parties net of Discontinued Operations (b)	% on line item (b/a)
				(millions of euros)					
Revenues	19,025	10	355			365	(23)	342	1.8
Other income	311		1			1		1	0.3
Acquisition of goods and services	7,793	21	231			252	(14)	238	3.1
Employee benefits expenses	3,106		2	83	36	121		121	3.9
Other operating expenses	1,083		1			1		1	0.1
Finance income	2,543		108			108		108	4.2
Finance expenses	3,450		114			114		114	3.3
Profit (loss) from Discontinued operations/ Non-current assets held for sale	47	(1)	10			9			

(*) Other related parties both through directors, statutory auditors and key managers (or executive officers under US rules) and as participants in shareholders' agreements pursuant to Article 122 of the Consolidated Law on Finance. According to Italian Rules, statutory auditors are considered related parties.

The **effects of the related party transactions on the Group separate consolidated statements of financial position** line items at December 31, 2018 and at December 31, 2017 are as follows:

Consolidated statement of financial position line items at December 31, 2018

	Total (a)	Associates, subsidiaries of associates and joint ventures	Other related parties (*)	Pension funds	Total related parties (b)	% on line item (b/a)
			(millions of euros)			
Non-current financial assets	(1,594)				—	
Current financial assets	(3,383)				—	
Non-current financial liabilities	25,059				—	
Current financial liabilities	5,913				—	
Trade and miscellaneous receivables and other current assets	4,706	3	19		22	0.5
Miscellaneous payables and other non-current liabilities	3,297		1		1	0.0
Trade and miscellaneous payables and other current liabilities	6,901	3	46	24	73	1.1

(*) Vivendi group and Companies belonging to the group that it belongs to; other related parties through directors, statutory auditors and key managers (or executive officers under US rules) are considered related parties.

Consolidated statement of financial position line items at December 31, 2017

	Total (a)	Associates, subsidiaries of associates and joint ventures	Other related parties (*)	Pension funds	Total related parties	% on line item (b/a)
			(millions of euros)			
Non-current financial assets	(1,768)				—	
Securities other than investments (current assets)	(993)		(15)		(15)	1.5
Financial receivables and other current financial assets	(437)		(38)		(38)	8.7
Cash and cash equivalents	(3,575)				—	
Current financial assets	(5,005)		(53)		(53)	1.1
Non-current financial liabilities	28,108		100		100	0.4
Current financial liabilities	4,756		163		163	3.4
Trade and miscellaneous receivables and other current assets	4,959	3	33		36	0.7
Trade and miscellaneous payables and other current liabilities	7,520	3	33	24	60	0.8

(*) Vivendi group and Companies belonging to the group that it belongs to; other related parties through directors, statutory auditors and key managers (or executive officers under US rules) are considered related parties.

The **effects of the related party transactions on the Group consolidated statements of cash flows** line items for the years 2018, 2017 and 2016 are as follows:

Consolidated statement of cash flows line items 2018

	Total (a)	Associates, subsidiaries of associates and joint ventures	Other related parties (*)	Pension funds	Total related parties (b)	% on line item (b/a)
	(millions of euros)					
Purchase of intangible and tangible assets on an accrual basis ...	6,478	3	—	—	3	0.0

(*) Vivendi group and Companies belonging to the group that it belongs to; other related parties through directors, statutory auditors and key managers (or executive officers under US rules) are considered related parties.

Consolidated statement of cash flows line items 2017

	Total (a)	Associates, subsidiaries of associates and joint ventures	Other related parties (*)	Pension funds	Total related parties	% on line item (b/a)
	(millions of euros)					
Purchase of intangible and tangible assets on an accrual basis	5,769	135	—	—	135	2.3

(*) Vivendi group and Companies belonging to the group that it belongs to; other related parties through directors, statutory auditors and key managers (or executive officers under US rules) are considered related parties.

Consolidated statement of cash flows line items 2016

	Total (a)	Associates, subsidiaries of associates and joint ventures	Other related parties (*)	Pension funds	Total related parties	Transactions of Discontinued Operations	Total related parties net of Discontinued Operations (b)	% on line item (b/a)
	(millions of euros)							
Purchase of intangible and tangible assets on an accrual basis	5,108	159	—	—	159	—	159	3.1

(*) Other related parties both through directors, statutory auditors and key managers (or executive officers under US rules) and as participants in shareholders' agreements pursuant to Article 122 of the Consolidated Law on Finance. According to Italian Rules, statutory auditors are considered related parties.

TRANSACTIONS WITH ASSOCIATES, SUBSIDIARIES OF ASSOCIATES AND JOINT VENTURES

Italtel S.p.A. was recapitalized in 2017. The TIM Group did not participate, leading to the disposal of the equity interests it held. The recapitalization concluded on December 14, 2017, as of which date the Italtel group was no longer a related party of the TIM Group.

Separate consolidated income statement line items

	2018	2017	2016	Type of contract
	(millions of euros)			
Revenues				
Asscom S.r.l.	1	1	1	Insurance brokerage
Italtel group		1	7	Provision of equipment rental, fixed and mobile telephone and outsourced communication services
NordCom S.p.A.	1	1	1	Fixed and mobile voice services, equipment, data network connections and outsourced
Other minor companies	—	—	1	
Total revenues	**2**	**3**	**10**	
Other income	**—**	**4**		Contributions governed by partnership agreements and penalties with respect to the Italtel group.
Acquisition of goods and services				
Italtel group		17	16	Supply and maintenance of switching equipment, software development and platforms upgrading, and customized products and services, as part of TIM offerings to the Italtel group customers, and extension of professional services for the new Multimedia Video Data Center for the provision of the TIM Vision service
NordCom S.p.A.	—	—	1	Supply and development of IT solutions, provision of customized services as part of TIM offerings to end customers, and rental expense for base transceiver station housing
W.A.Y. S.r.l.	4	4	4	Supply, installation and assistance services for geolocation equipment provided as part of offers to TIM customers and development and integration services provided under the Consip agreement.
Other minor companies	1	1		
Total acquisition of goods and services	**5**	**22**	**21**	
Finance expenses	**3**	**11**	**—**	Write-down of the financial receivable due from Alfiere.

Consolidated statement of financial position line items

	As of December 31, 2018	As of December 31, 2017	Type of contract
	(millions of euros)		
Trade and miscellaneous receivables and other current assets			
Alfiere S.p.A.	1	1	Contracts for project management, administration, corporate and compliance services, and sundry chargebacks.
W.A.Y. S.r.l.	1	1	Supply of fixed-line and mobile services
Other minor companies	1	1	
Total trade and miscellaneous receivables and other current assets	**3**	**3**	
Trade and miscellaneous payables and other current liabilities			
Movenda S.p.A.	1	1	Supply and certification of SIM-cards, software systems.
W.A.Y. S.r.l.	1	1	Supply, installation and assistance services for geolocation equipment provided as part of offers to TIM customers and development and integration services provided under the Consip agreement.
Other minor companies	1	1	
Total trade and miscellaneous payables and other current liabilities	**3**	**3**	

Consolidated statement of cash flows line items

	2018	2017	2016	Type of contract
	(millions of euros)			
Purchase of intangible and tangible assets on an accrual basis				
Italtel group		132	157	Purchases of telecommunications equipment
Movenda S.p.A.	2	2	2	Information technology services and licenses for Mobile Connect Cardlets
Other minor companies	1	1		
Total purchase of intangible and tangible assets on an accrual basis	**3**	**135**	**159**	

The shareholder loan with the joint venture Alfiere S.p.A. in place at December 31, 2017 (11 million euros) was used to cover losses for 3 million euros and was subsequently increased by 3 million euros during 2018. The remaining amount, of 11 million euros, was fully written down.

At December 31, 2018, TIM S.p.A. had issued guarantees in favor of Alfiere S.p.A. for 1 million euros.

TRANSACTIONS WITH OTHER RELATED PARTIES (Both through directors, statutory auditors and key managers—or executive officers under US rules—and as participants in shareholders' agreements pursuant to Article 122 of the Consolidated Law on Finance. According to Italian Rules, statutory auditors are considered related parties).

Details are provided below of the transactions with:

- Vivendi Group and the companies of the group it belongs to (as a result of the resolutions of the Board of Directors of TIM S.p.A. of May 3 and June 1, 2017);
- Related companies through Directors appointed on May 4, 2018;
- Former Telco company and related companies through Directors whose term of office ended on May 4, 2018.

The most significant amounts are summarized as follows:

Separate consolidated income statement line items

	2018	2017	2016	Type of contract
	(millions of euros)			
Revenues				
Other Directors or through	1			Fixed-line and mobile voice services and devices.
Mediobanca group	1	4	7	Telephone services, sale of equipment, data network services and Internet accesses.
Former Telco Companies		110	348	See the Note "Related party transactions" in the TIM Group Consolidated Financial Statements at December 31, 2017.
Other minor companies	1	1	—	
Total revenues	**3**	**115**	**355**	Interconnection services, roaming, broadband access fees, supply of "IRU" transmission capacity and software
Other income	**—**	**4**	**1**	See the Note "Related party transactions" in the TIM Group Consolidated Financial Statements at December 31, 2017.
Acquisition of goods and services				
Havas group	146	91	—	Purchase of media space on behalf of the TIM Group and, to a lesser extent, development and delivery of advertising campaigns.
Mediobanca group	—	1	1	Credit recovery activities.
Vivendi group	9	9	8	Purchase of musical and television digital content (TIMmusic and TIMvision) and supply of D&P cloud-based games (TIMgames).
Former Telco Companies		69	221	See the Note "Related party transactions" in the TIM Group Consolidated Financial Statements at December 31, 2017.
Other Directors or through	2	—	1	Amounts recognized for telephone services to be paid back.
Total acquisition of goods and services	**157**	**170**	**231**	
Employee benefits expenses	**—**	**1**	**2**	See the Note "Related party transactions" in the TIM Group Consolidated Financial Statements at December 31, 2017.
Other operating expenses	—	—	1	Expenses for penalties and contractual breaches towards the Intesa Sanpaolo group
Finance income				
Mediobanca group	8	15	18	Bank accounts, deposits and hedging derivatives.
Former Telco Companies		30	90	See the Note "Related party transactions" in the TIM Group Consolidated Financial Statements at December 31, 2017.
Total finance income	8	45	108	
Finance expenses				
Mediobanca group	6	15	26	Term Loan Facility and Revolving Credit Facility and hedging derivatives.
Former Telco Companies		23	88	See the Note "Related party transactions" in the TIM Group Consolidated Financial Statements at December 31, 2017.
Total finance expenses	**6**	**38**	**114**	

Consolidated statement of financial position line items

	As of December 31, 2018	As of December 31, 2017	Type of contract
	(millions of euros)		
Securities other than investments (current assets)		15	Bonds issued by Mediobanca.
Financial receivables and other current financial assets		38	Hedging derivatives, loans, financing and finance leases made with Mediobanca.
Non-current financial liabilities		100	Hedging derivatives, loans, financing and finance leases made with Mediobanca.
Current financial liabilities		163	Hedging derivatives and loans made with Mediobanca.

Consolidated statement of financial position line items

	As of December 31, 2018	As of December 31, 2017	Type of contract
Trade and miscellaneous receivables and other current assets			
Other Directos or through	1	3	Fixed-line and mobile voice services and devices.
Havas group	17	29	Purchase of media space on behalf of the TIM Group and, to a lesser extent, development and delivery of advertising campaigns.
Vivendi Group	1		TIM Show 2018 service and TV series rights.
Other minor companies		1	
Total trade and miscellaneous receivables and other current assets	**19**	**33**	
Miscellaneous payables and other non-current liabilities	1		Deferred income for IRU sale to the Vivendi group.
Trade and miscellaneous payables and oher current liabilities			
Havas group	44	30	Purchase of media space on behalf of the TIM Group and, to a lesser extent, study and implementation of advertising campaigns
Mediobanca group		1	Credit recovery activities.
Vivendi group	2	2	Purchase of musical and television digital content (TIMmusic and TIMvision) and supply of D&P cloud-based games (TIMgames).
Total trade and miscellaneous payables and other current liabilities	**46**	**33**	

TRANSACTIONS WITH PENSION FUNDS

Separate consolidated income statements line items

	2018	2017	2016	Type of contract
	(millions of euros)			
Employee benefits expenses				Contributions to pension funds
Fontedir	8	10	11	
Telemaco	66	67	69	
Other pension funds	4	(3)	3	
Total employee benefits expenses	**78**	**74**	**83**	

Consolidated statement of financial position line items

	As of December 31, 2018	As of December 31, 2017	Type of contract
	(millions of euros)		
Trade and miscellaneous payables and other current liabilities			Payables for contributions to pension funds
Fontedir	3	3	
Telemaco	21	21	
Total trade and miscellaneous payables and other current liabilities	**24**	**24**	

* * *

REMUNERATION TO KEY MANAGERS

In 2018, the total remuneration recorded on an accrual basis by TIM or by Group subsidiaries in respect of key managers amounted to 14.0 million euros (37.0 million euros in 2017). The figure breaks down as follows:

	2018	2017	2016
		(millions of euros)	
Short-term remuneration	6.8(1)	10.4(4)	13.1(1)
Long-term remuneration	0.5	0.1(5)	1.9
Employment termination benefit incentives	5.6(2)	25.5	12.0(7)
Share-based payments(*)	1.0(3)	1.0(6)	9.1(3)
	14.0	**37.0**	**36.1**

(*) These refer to the fair value of the rights, accrued to December 31, under the share-based incentive plans of TIM S.p.A. and its subsidiaries (Long Term Incentive 2018 and Plans of the subsidiaries).

(1) of which 1.1 million euros recorded by the subsidiaries;

(2) of which 2.4 million euros recorded by the subsidiaries;

(3) of which 0.2 million euros recorded by the subsidiaries;

(4) of which 1.6 million euros recorded by the subsidiaries;

(5) of which 0.1 million euros recorded by the subsidiaries;

(6) of which 1.0 million euros recorded by the subsidiaries.

(7) of which 0.6 million euros recorded by the subsidiaries.

Short-term remuneration is paid during the period it pertains to, and, at the latest, within the six months following the end of that period. In 2018, this item did not include the effects of the reversal of accruals related to the 2017 costs that came to 1.25 million euros.

Employment termination benefit incentives for 2017 related to the amount awarded as a settlement to Flavio Cattaneo and did not include the reversal, totaling 10.7 million euros, of the accruals made in 2016 for the Special Award.

In 2018, contributions to defined contribution plans (Assida and Fontedir) paid by TIM S.p.A. or subsidiaries of the Group in favor of Key Managers totaled 119,000 euros (97,000 euros in 2017).

In 2018, "Key managers", i.e. those who have the power and responsibility, directly or indirectly, for the planning, direction and control of the operations of the TIM Group, including directors, were the following:

Directors:	
Arnaud Roy de Puyfontaine	(1) Executive Chairman of TIM S.p.A.
Giuseppe Recchi	(2) Deputy Executive Chairman of TIM S.p.A.
Fulvio Conti	(3) Executive Chairman of TIM S.p.A.
Amos Genish	(4) Managing Director and Chief Executive Officer of TIM S.p.A.
	(5) General Manager of TIM S.p.A.
Luigi Gubitosi	(6) Managing Director and Chief Executive Officer of TIM S.p.A.
	(6) General Manager of TIM S.p.A.
Managers:	
Stefano De Angelis	(7) Diretor Presidente Tim Participações S.A.
Sami Foguel	(8)
Stefano Azzi	(9) Head of Consumer & Small Enterprise
	(18) Chief Consumer Office
Stefano Ciurli	(9) Head of Wholesale
Giovanni Ferigo	(9) Head of Technology
Lorenzo Forina	(9) Head of Business & Top Clients
	(18) Chief Business & Top Clients Office
Mario Di Mauro	(10) Strategy, Innovation & Customer Experience
Riccardo Meloni	(11) Head of Human Resources & Organizational Development
Cristoforo Morandini	(9) Head of Regulatory Affairs and Equivalence
Agostino Nuzzolo	(12) Head of Legal, Regulatory and Tax
Piergiorgio Peluso	Head of Administration, Finance and Control
Elisabetta Romano	(13) Chief Technology Office
Pietro Scott Iovane	(14) Chief Commercial Office
Michel Sibony	(15) Head of the Procurement Unit & Real Estate
Anna Spinelli	(16) Head of the Procurement Unit & Real Estate
Stefano Siragusa	(17) Chief Wholesale Infrastructures Network and Systems Office

(1) to April 24, 2018;

(2) to March 22, 2018;

(3) from November 13, 2018 to November 17, 2018;

(4) to April 24, 2018 and from May 7 to November 13, 2018;

(5) to November 14, 2018;

(6) from November 18, 2018;

(7) to July 22, 2018;

(8) from July 23, 2018;

(9) to March 5, 2018;

(10) from March 6, 2018; with organization communication dated January 7, 2019, the structure was renamed: Innovation and Customer Experience;

(11) from March 16, 2018;

(12) with organization communication dated January 7, 2019, the structure was renamed: Legal & Tax;

(13) from July 1, 2018;

(14) from April 19, 2018 to September 11, 2018;

(15) to May 16, 2018;

(16) from September 1, 2018;

(17) from March 12, 2018;

(18) from September 24, 2018.

NOTE 40—EQUITY COMPENSATION PLANS

Equity compensation plans in place at December 31, 2018 are used for retention purposes and to offer long-term incentives to Group managers and personnel.

A summary is provided below of the plans in place at December 31, 2018.

DESCRIPTION OF STOCK OPTION PLANS

TIM S.p.A. 2014-2016 Stock Option Plan

The objective of the 2014–2016 Stock Option Plan, introduced following its approval by the Board of Directors of the Company on June 26, 2014, was to encourage management holding organizational positions that are crucial to the company business to focus on the medium/long-term growth in value of company shares. It was aimed at the then Chief Executive Officer, Top Management (including Key Officers) and select TIM Group managers.

Please refer to the Financial Statements at December 31, 2017 for a description of the plan.

The three-year exercise period (March 24, 2017—March 24, 2020) commenced following the approval of the financial statements for 2016 by the Board of Directors on March 23, 2017.

Based on final data approved, the number of exercisable options is 20% of the total options assigned to targets.
The exercise price was set, by the Board of Directors meeting that initiated the plan at 0.94 euros per option (strike price). For the allocations made in 2015 and 2016, the strike price was determined as the higher of the price established upon initial allocation and the price resulting from the application of the above criteria at the time of allocation of the options. Below is the situation at December 31, 2018:

- 133,042 shares at a unit price of 1.15 euros;
- 343,069 shares at a unit price of 1.01 euros;
- 893,617 shares at a unit price of 0.99 euros;
- 13,497,406 shares at a unit price of 0.94 euros.

Tim Participações S.A. Stock Option Plan

- **2011-2013 Plan**

  On August 5, 2011, the General Meeting of Shareholders of Tim Participações S.A. approved the long-term incentive plan for managers in key positions in the company and its subsidiaries. Exercise of the options is subject to achieving two objectives simultaneously:

  - absolute performance: increase in value of the Tim Participações S.A.'s shares;
  - relative performance: performance of the price of Tim Participações S.A.'s shares against a benchmark index mainly composed of in the Telecommunications, Information Technology and Media industry.

Performance targets refer to the three-year period 2011-2013 and performance is recorded in July of each year.

The vesting period is 3 years (33% the first year, 66% the second year and the balance in the third year), the options are valid for 6 years, and the company does not have the legal obligation to repurchase or liquidate the options in cash, or in any other form.

- **2011**

  The grantees of the options were granted the right to purchase a total of 2,833,596 shares.

  The exercise period expired in August 2017. As such, the plan is now closed.

- **2012**

  On September 5, 2012 the grantees of the options were granted the right to purchase a total of 2,661,752 shares.

  The exercise period expired in September 2018; the 194,756 pending options were canceled and so the plan was closed.

- **2013**

  On July 30, 2013, the grantees of the options were granted the right to purchase a total of 3,072,418 shares.

  As at December 31, 2018 all pending options were vested, and 543,583 options were still valid.

- **2014-2016 Plan**

On April 10, 2014, the General Meeting of Shareholders of Tim Participações S.A. approved the long-term incentive plan for managers in key positions in the company and its subsidiaries.

Exercise of the options is not subject to the achievement of specific performance targets, but the exercise price is adjusted upwards or downwards according to the performance of the Tim Participações S.A. shares in a ranking of Total Shareholder Return, in which companies in the Telecommunications, Information Technology and Media industry are compared during each year of validity of the plan. If the performance of the Tim Participações S.A. shares, in the 30 days prior to September 29 of each year, is in last place in that ranking, the participant loses the right to 25% of the options vesting at that time.

The vesting period is 3 years (a third per year), the options are valid for 6 years, and the company does not have the legal obligation to repurchase or liquidate the options in cash, or in any other form.

- **2014**

  On September 29, 2014, the grantees of the options were granted the right to purchase a total of 1,687,686 shares.

  At the end of December 2018, 531,972 options were still valid.

- **2015**

  On October 16, 2015, the grantees of the options were granted the right to purchase a total of 3,355,229 shares.

  In 2018, 656,268 options were exercised and 291,949 expired due to terminations. The first wave exercised was valued at 8.7341 reais, up 3.33% based on the position in the ranking of benchmarked companies.

  In the second wave, options were exercised at a price of 8.4625 reais, thanks to the improvement in the above ranking.

  In the last wave, options were exercised at a price of 7.6074 reais, with a 10% discount based on the position in the ranking of benchmarked Companies.

  At the end of December 2018, 292,523 options were still valid.

- **2016**

  On November 8, 2016, the grantees of the options were granted the right to purchase a total of 3,922,204 shares.

  In December 2018, 510,884 options were exercised at a price of 7.6928 reais, due to the 5% readjustment of the price as a result of being ranked first in the list of benchmarked companies. At the same time, 1,277,878 options expired due to terminations.

  The first wave exercised was valued at 7.6928 reais, discounted 5% based on the position in the ranking of benchmarked companies.

  In the second wave, options were exercised at a price of 7.2879 reais, with a 10% discount based on the position in the ranking of benchmarked Companies.

  At the end of December 2018, 895,522 options were still valid.

DESCRIPTION OF OTHER EQUITY COMPENSATION PLANS

TIM S.p.A.—2018-2020 Long Term Incentive Plan

On April 24, 2018, the Shareholders' Meeting of Telecom Italia S.p.A. ("TIM", the "Company" or the "Issuer"), approved a Long Term Incentive Plan 2018 (the "Plan").

The objective of the Plan is to create incentives for Beneficiaries upon achievement of Group corporate objectives set out in the industrial plan, bringing the interests of management holding organizational positions that are crucial to the company business into line with the interests of TIM owners in terms of growth in value of the Share over the medium to long term.

The Plan envisages two grants: a first grant reserved to the Chief Executive Officer, serviced by a maximum of 30,000,000 shares; a second grant for a select number of Group management (serviced by a maximum of 55,000,000 shares).

It provides for a three-year vesting period (2018–2020) and the bonus allocation of ordinary shares of the company Telecom Italia subject to the achievement of the performance conditions stated below, as assessed by the Board of Directors when approving the TM Group consolidated financial statements at December 31, 2020:

- **Stock performance** (70% weighting): Performance of the ordinary share of Telecom Italia compared to the average performance of a basket of Peers made up of the following peers: Deutsche Telekom AG, Vodafone Group PLC, Telefonica SA, Orange SA, BT Group PLC, Telenor ASA, Swisscom AG, Telia Co AB, Koninklijke KPN NV, Proximus SADP, Elisa OYJ;
- **Equity Free Cash Flow** (30% weighting): Parameter tied to the generation of cash cumulated over the three-year period. This indicator, considered net cash flow before the dividend and the investment in frequencies, pursuant to the 2018-2020 industrial plan, is measured as follows:
  - (+) adjusted EBITDA, i.e. reported EBITDA adjusted for any non-recurring line items;
  - (-) capital expenditures (capex; not including the investment in frequencies);
  - (+/-) changes in adjusted net working capital (reported adjusted for any non-recurring items), including the changes in the operating provisions;
  - (-) total finance expenses;
  - (-) taxes

This amount is the Free Cash Flow available for paying dividends, debt repayment, the impact of IAS 17 (finance lease) and the investment in frequencies, and does not include the financial impact of investment acquisition and/or disposal transactions (M&A).

Following assignment, all shares will be subject to the lock-up clause for two years.

The operating terms and conditions of the Plan are set forth in the Plan Rules, approved by the Board of Directors on July 24, 2018, which resolved its start-up.

TIM S.p.A.—Special Award 2016—2019

For the description of the Special Award 2016-2019, launched in 2016, see the Consolidated financial statements at December 31, 2017.

At December 31, 2018 the Key Managers, identified in 2017 as beneficiaries in relation to the 1.5% share of the 2016 over-performance, were granted a total amount of 1 million euros (of which 0.8 million euros consisted of 1,025,640 TIM S.p.A. ordinary shares and the remainder in cash). The payment is scheduled for after the approval of the Financial Statements for the year 2019.

TIM Participações S.A.—2018—2020 Plan

On April 19, 2018, the General Meeting of Shareholders of Tim Participações S.A. approved the long-term incentive plan for managers in key positions in the company and its subsidiaries. The plan aims to remunerate participants with shares issued by the company, subject to specific temporal and/or performance conditions (upon reaching specific targets). The 2018-2020 Plan does not cover criteria for setting the purchase or exercise price because the shares are granted at market value.

The vesting period is 3 years (a third per year) and the company does not have the legal obligation to repurchase or liquidate the shares in cash or in any other form. The portion of shares linked to performance (70%) is granted 1/3 each year, if the performance target is achieved; the remaining portion of shares (30%) is granted 3 years after allocation.

The plan allows for the shares to be transferred and also allows for payment to be made in the equivalent cash value.

- **2018**

  On April 20, 2018, the grantees were granted the right to obtain a total of 849,932 shares. As at December 31, 2018, the first vesting period has not yet finished. However, 383,418 shares were canceled due to the participants leaving the company. At the end of December 2018, 466,514 shares were still valid.

INWIT S.p.A. Long Term Incentive 2018—2020

The INWIT S.p.A. Shareholders' Meeting approved the Long Term Incentive Plan 2018 – 2020 (the "Plan") on April 13, 2018 and authorized the Board of Directors to purchase and make available Company shares in one or more times and for an eighteen-month period starting from the date of the shareholders' meeting resolution. These shares serve to establish the aforementioned share incentive plan. The purchases will concern a maximum number of 400,000 ordinary shares of the Company, representing about 0.07% of the INWIT share capital.

The objective of the Plan is to create incentives for Beneficiaries upon achievement of Company strategic objectives set out in the industrial plan communicated to the market, bringing the interests of management holding organizational positions that are crucial to the company business into line with the interests of INWIT owners in terms of growth in value of the share over the medium to long term.

The Plan provides for a three-year vesting period (2018–2020) and the bonus allocation of shares subject to the achievement of two performance conditions, as assessed by the Board of Directors when approving the Company financial statements at December 31, 2020:

- Total Shareholder Return regarding INWIT (60% weighting). The parameter measures INWIT's TSR position in the Italian and foreign TowerCo TSR ("peer group") rankings;
- cumulative Recurring Free Cash Flow over the period 2018-2020 (40% weighting). This indicates the cash flow generated by operational management after investments to maintain infrastructures and after finance expenses. On the other hand, development investments are not included.

The operating terms and conditions of the Plan are set forth in the Plan Rules, approved by the Board of Directors during its meeting on July 23, 2018.

Start-up of the Plan was resolved by the Board of Directors on November 6, 2018.

Purchase of 222,118 treasury shares through Mediobanca—Banca di Credito Finanziario S.p.A., representing 0.037% of the share capital implemented by INWIT for funding the service of the 2018-2020 Long Term Incentive Plan, was finalized on November 15, 2018.

The shares are deposited on a securities account held by Inwit S.p.A. at Intesa Sanpaolo S.p.A..

CALCULATION OF FAIR VALUE MEASUREMENT OF THE GRANTED OPTIONS AND RIGHTS

Parameters used to determine fair value—Tim S.p.A. LTI 2018-2020 Plan

Plans/Parameters	Exercise price (euro)	Nominal value (euro) (1)	Volatility (2)	Period	Expected dividends (euro)	Risk-free interest rate (3)
LTI 2018-2020 Plan—equity component	0	0.63	n.a.	3 years	0	-0.552% at 3 years
LTI 2018-2020 Plan—equity component (New CEO)	0	0.51	n.a.	2 years	0	-0.594% at 2 years

(1) Arithmetic mean of the official prices of the Shares recognized starting from the stock market trading day prior to that of assignment until the thirtieth previous ordinary calendar day (both included) on the Electronic Stock Exchange organized and managed by Borsa Italiana S.p.A., calculated using only the days to which the prices taken as the basis of calculation refer as the divisor, cut off at the second decimal.

(2) Based on the performance objectives of the plan, the TIM share volatility values were considered and, if necessary, also those of the securities of the major companies of the telecommunications sector ("peer basket").

(3) The risk-free interest rate refers to the rate of government securities of the Federal Republic of Germany (market benchmark for transactions in euros) with due date consistent with the period of reference at the valuation date.

Parameters used to determine fair value—Tim Participações S.A.

Plan/parameter	Exercise price (reais)	Nominal value (reais)	Volatility	Period	Expected dividends (reais)	Risk-free interest rate
Stock Option Plan 2011	8.84		51.73%	6 years	—	11.94% per annum
Stock Option Plan 2012	8.96		50.46%	6 years	—	8.89% per annum
Stock Option Plan 2013	8.13		48.45%	6 years	—	10.66% per annum
Stock Option Plan 2014	13.42		44.60%	6 years	—	10.66% per annum
Stock Option Plan 2015	8.45		35.50%	6 years	—	16.10% per annum
Stock Option Plan 2016	8.1		36.70%	6 years	—	11.73 per annum
2018-2020 Plan		14.41		3 years	—	n.a.

Parameters used to determine fair value—INWIT S.p.A.

Plans/Parameters	Exercise price (euro)	Nominal value (euro) (1)	Volatility	Period	Expected dividends (euro)	Interest rate
INWIT LTI 2018-2020	0	6.208	n.a.	3 years	0.19	-0.1 annual

(1) Arithmetic mean of the official prices of the INWIT S.p.A. ordinary shares recognized on the Electronic Stock Exchange organized and managed by Borsa Italiana S.p.A. over the 30 calendar days prior to the date of the Board of Directors meeting held November 6, 2018 (October 6, 2018—November 5, 2018).

Effects on the income statement and statement of financial position

Equity compensation plans which call for payment in equity instruments are recorded at fair value (except for the 2018 Plan of TIM Participações) which represents the cost of such instruments at the grant date and is recorded in the separate income statements under "Employee benefits expenses" over the period between the grant date and the vesting period with a contra-entry to the equity reserve "Other equity instruments". For the portion of the plans that provide for the payment of compensation in cash, the amount is recognized in liabilities as a contra-entry to "Employee benefits expenses"; at the end of each year such liability is measured at fair value (except for the 2018 Plan of TIM Participações).

Equity compensation plans which call for payment in equity instruments did not have significant impacts either on the income statements or the statements of financial position or of cash flows of the TIM Group at December 31, 2018.

NOTE 41—OTHER INFORMATION

a) Exchange rates used to translate the financial statements of foreign operations (*)

	Year-end exchange rates (statements of financial position items)			Average exchange rates for the year (income statements and statements of cash flows items)		
(Local Currency against 1 euro)	12/31/2018	12/31/2017	12/31/2016	Year 2018	Year 2017	Year 2016
Europe						
BGN Bulgarian Lev	1.95580	1.95580	1.95580	1.95580	1.95580	1.95580
CZK Czech Koruna	25.72400	25.53500	27.02100	25.64653	26.32658	27.03443
CHF Swiss Franc	1.12690	1.17020	1.07390	1.15517	1.11171	1.09004
TRY Turkish Lira	6.05880	4.54640	3.70720	5.69649	4.12109	3.34284
GBP Pound Sterling	0.89453	0.88723	0.85618	8.88474	0.87640	0.81905
RON Romanian Leu	4.66350	4.65850	4.53900	4.65441	4.56884	4.49053
RUB Russian Ruble	79.71500	69.39200	64.30000	74.03808	65.90160	74.15831
North America						
USD U.S. Dollar	1.14500	1.19930	1.05410	1.18121	1.12946	1.10666
Latin America						
VEF Venezuelan Bolivar - Fuerte	n.a.	16.19055	14.23035	n.a.	15.18018	14.90133
VES Venezuelan Bolivar -Soberano	729.80267	n.a.	n.a.	(**)139.15438	n.a.	n.a.
BOB Bolivian	7.91200	8.28720	7.28383	8.16214	7.80453	7.64702
PEN Peruvian Nuevo Sol	3.86300	3.88540	3.54020	3.87979	3.68247	3.73505
ARS Argentinean Peso	43.15930	22.93100	16.74880	32.85850	18.73314	16.33204
CLP Chilean Peso	794.37000	737.29000	704.94500	756.93992	732.28973	748.49536
COP Colombian Peso	3,721.81000	3,580.19000	3,169.49000	3,488.43046	3,334.88410	3,376.68116
BRL Brazilian Real	4.43664	3.96728	3.43542	4.30628	3.60584	3.85935
Other countries						
ILS Israeli Shekel	4.26270	4.16350	4.04770	4.24360	4.06091	4.24812

(*) Source: data processed by the European Central Bank, Reuters and major Central Banks.

(**) On August 20, 2018 the Venezuelan Central Bank introduced a new currency (Bolivar Soberano, VES) to replace the previous currency (Bolivar Fuerte, VEF). . The average 2018 exchange rate therefore relates to the period from August 20 to December 31, 2018.

b) Research and development

Expenditures for research and development activities are represented by external costs, labor costs of dedicated staff and depreciation and amortization. Details are as follows:

	2018	2017	2016
	(millions of euros)		
Research and development costs expensed during the year	44	43	44
Development costs capitalized	1,168	1,949	1,704
Total research and development costs (expensed and capitalized)	**1,212**	**1,992**	**1,748**

The decrease in 2018 is mainly connected to the completion of the engineering, expansion and development of next generation networks, i.e. LTE and NGAN, which have not reached maturity on the part of the Parent.

In the 2018 separate consolidated income statements, a total of 820 million euros of amortization expense was recorded for development costs, capitalized during the year and in prior years.

c) Operating leases

In accordance with IAS 17, the Group also considers as non-cancelable those operating leases that can only be canceled upon the occurrence of some remote contingency, with the permission of the lessor, or upon payment by the lessee of such an additional significant contractual penalty that renders early termination of the contract unreasonable.

In particular:

Revenue related

The Group has entered into agreements for line lease and hosting which cannot be canceled. At December 31, 2018 and 2017 the amount of lease installments receivables is as follows:

	At December 31, 2018	At December 31, 2017
	(millions of euros)	
Within 1 year	89	124
From 2 to 5 years	244	238
Beyond 5 years	134	98
Total	**467**	**460**

Expense related

The TIM Group has entered into non-cancelable operating leases on properties, rental agreements for IT products, equipment and devices and hosting contracts on sites owned by third parties.

The measurement perimeter shown excludes—in addition to leases already classified as finance leases (mainly real estate leases and leases on equipment and vehicles) whose Asset and Liability value is recognized in the financial statements—also for the variable and accessory components of these leases (e.g. underlying land of leased buildings), as well as leases considered cancelable, as defined above.

At December 31, 2018 the amount of lease installments receivable is as follows:

	At December 31, 2018	At December 31, 2017
	(millions of euros)	
Within 1 year	153	177
From 2 to 5 years	307	298
Beyond 5 years	35	60
Total	**495**	**535**

It should also be noted that, in addition to the above, the IFRS 16 accounting standard—Leases (applied from January 1, 2019) includes subscription charges relating to operating leases outstanding at December 31, 2018 relating to cancelable passive real estate contracts or lease periods classified as cancelable (for example, subsequent lease renewals).

For further details on the application of the new IFRS 16 accounting standard, see the Note "Accounting Policies".

d) Public funds

Italian Law 124/2017 requires that information on subsidies, contributions, paid assignments and economic benefits of any kind received from Italian public administrations be provided. In relation to this, funds received by the TIM Group are shown in the following table:

Distributing entity	Intervention segment	2018 collections (millions of euros)
Fondimpresa	training	5
Fondirigenti	training	1
Infratel	construction of ultrabroadband infrastructure	106
Ministry of Economic Development	construction of mobile network infrastructure	1
	technological innovation projects	1
MIUR	research and energy efficiency projects	1
Autonomous Province of Trento	Eschooling project	1
Total		**116**

NOTE 42—EVENTS SUBSEQUENT TO DECEMBER 31, 2018

TIM: BOND ISSUE AT 5 YEARS AND 3 MONTHS FOR 1 BILLION 250 MILLION EUROS

On January 8, TIM S.p.A. successfully concluded the launch of a fixed-rate bond issue for 1 billion 250 million euros intended for institutional investors, financing itself below its average cost of debt.

The yield of the issue, equal to 4.125%, is lower than the Group's average cost of debt, which was about 4.4% at the end of September 2018.

The issue is part of the maturing debt optimization and refunding process.

Issuer: Telecom Italia S.p.A.
Amount: 1 billion 250 million euros
Settlement date: January 11, 2019
Maturity: April 11, 2024
Coupon: 4.000%
Issue price: 99.436%
Repayment price: 100.000%

Actual yield upon maturity, 4.125%, corresponds to a yield of 387.6 basis points above the reference rate (mid swap).

The securities were issued as part of the Group 20 billion-euro EMTN program and will be listed on the Luxembourg Stock Exchange.

VODAFONE ITALIA AND TELECOM ITALIA INTEND TO BEGIN A NEW PARTNERSHIP FOR MOBILE NETWORK SHARING

Vodafone Italia ("Vodafone") and the Telecom Italia Group ("TIM") intend to begin a partnership to share the active component of the 5G network, assess the possibility of sharing active devices on the 4G network and expand the current passive sharing agreement; the partnership will allow for more rapid 5G development, across a wider geographical area and at a lower cost.

The two companies:

- intend to cooperate to adapt their fiber transmission networks for mobile backhauling;
- intend to assess merging the respective passive infrastructures into a single entity, for a total of 22,000 towers in Italy;
- have signed a Memorandum of Understanding and have agreed to begin exclusive negotiations on the overall project.

On February 21, 2019 Vodafone and TIM announced that they had signed a non-binding Memorandum of Understanding in relation to a potential partnership to share the active network and expand the current passive infrastructure sharing agreement.

The Parties are also assessing the feasibility and contents of a possible merger agreement for their respective transmission towers in Italy into a single entity.

To allow assessment of these initiatives, Vodafone and TIM have agreed a period of negotiation exclusivity.

In relation to the project to share the active network, Vodafone and TIM intend to sign an agreement that would allow joint development of the 5G infrastructure. This project will allow for more rapid 5G development, across a wider geographical area and at a lower cost. Vodafone and TIM will assess the technical and commercial feasibility of jointly installing their active 5G equipment across the country, including in some large cities where each company may wish to maintain strategic flexibility and ensure its ability to respond to the needs of its customers.

Vodafone and TIM also intend to assess the possibility of also sharing active equipment on the existing 4G networks, in support of 5G network active sharing; this could also generate further efficiencies. In addition, Vodafone and TIM intend to adapt their respective mobile transmission networks, through the use of higher capacity fiber-optic cables ("Fiber-to-the-Site" or "backhauling"). This would allow customers to take advantage of the new 5G features, such as higher speed and lower latency, and would generate greater economies of scale for the companies.

Vodafone and TIM also intend to extend their current passive infrastructure network agreement, moving from the current 10,000 sites (about 45% of the two companies' total tower numbers) to national coverage, with the aim of accelerating and strengthening 5G technology development and of using the network infrastructure more efficiently, in both urban and rural areas.

In relation to the potential combination, Vodafone and TIM have agreed to assess a potential transaction to allow them to consolidate approximately 22,000 telecommunication towers in Italy, merging into a single entity the passive network infrastructures of Vodafone with those of Infrastrutture Wireless Italiane ("Inwit"), a listed company 60% owned by TIM. The combination would be structured to create value for all the parties involved. The companies intend to assess the opportunity, where possible, to move active network equipment currently hosted on third-party towers to the new company over time. The expanded tower infrastructure would allow the continued pursuit of the objective to increase other operator hosting, generating further efficiencies.

The potential combination would be structured to give Vodafone and TIM the same equity investment and equal governance rights in Inwit, as well to ensure the parties do not have to launch a public tender offer on Inwit shares.

As a whole, the initiative aims to promote sector competition and facilitate an open environment for 5G development.

All the projects described are covered, in their essential terms, in a non-binding Memorandum of Understanding and their implementation is conditional on the signing of binding agreements between the parties, as well as the necessary antitrust clearance.

Vodafone and TIM aim to conclude one or more of the Initiatives during 2019.

NOTE 43—LIST OF COMPANIES OF THE TIM GROUP

The list is divided by type of investment, consolidation method and operating segment.

The following is indicated for each company: name, head office, country and share capital in the original currency, in addition to the percentage holding of share capital, the percentage of voting rights in the ordinary shareholders' meeting if different than the percentage holding of share capital, and which companies hold the investment.

TIM Group

Name	Head Office	Currency	ShareCapital	% ownership	% of voting rights	Held by
PARENT COMPANY						
TIM S.p.A.	MILAN (ITALY)	EUR	11,677,002,855			
Subsidiaries consolidated line-by-line						
DOMESTIC BUSINESS UNIT						
4G RETAIL S.r.l. (sale of fixed and mobile telecommunications products and services and all analog and digital broadcasting equipment)	MILAN (ITALY)	EUR	2,402,241	100.0000		TIM S.p.A.
ADVANCED CARING CENTER S.r.l. (telemarketing, market research and surveys activities and development)	ROME (ITALY)	EUR	600,000	100.0000		TELECONTACT CENTER S.p.A.
CD FIBER S.r.l. (design, construction, maintenance and management of network infrastructure services and high-speed electronic communication systems)	ROME (ITALY)	EUR	50,000	100.0000		TIM S.p.A.
FLASH FIBER S.r.l. (development, implementation, maintenance and supply of the fiber network in Italy)	MILAN (ITALY)	EUR	30,000	80.000		TIM S.p.A.

Name	Head Office	Currency	ShareCapital	% ownership	% of voting rights	Held by
H.R. SERVICES S.r.l. (personnel training and services)	L'AQUILA (ITALY)	EUR	500,000	100.0000		TIM S.p.A.
INFRASTRUTTURE WIRELESS ITALIANE S.p.A.. (installation and operation of installations and infrastructure for the management and the sale of telecommunications services)	MILAN (ITALY)	EUR	600,000,000	60.0333 0,0370	60,0556	TIM S.p.A. INFRASTUTTURE WIRELESS ITALIANE S.p.A.
MED-1 SUBMARINE CABLES Ltd (construction and management of submarine cable Lev1)	RAMAT GAN (ISRAEL)	ILS	55,886,866	100.0000		TELECOM ITALIA SPARKLE S.p.A.
NOVERCA S.r.l. (development and provision of services in the TLC and multimedia sector in Italy and abroad)	ROME (ITALY)	EUR	10,000	100.0000		TIM S.p.A.
OLIVETTI S.p.A. (production and sale of office equipment and information technology services)	IVREA (TURIN— ITALY)	EUR	10,000,000	100.0000		TIM S.p.A.
OLIVETTI SCUOLA DIGITALE s.R.L. (formerly ALFABOOK S.r.l.) (on-line sale of digital texts)	TURIN (ITALY)	EUR	100,000	100.0000		OLIVETTI S.p.A.
PERSIDERA S.p.A. (purchase, sale and maintenance of systems for repair work and radio and television broadcasting)	ROME (ITALY)	EUR	21,428,572	70.0000		TIM S.p.A.
TELECOM ITALIA SAN MARINO S.p.A. (San Marino telecommunications management)	BORGO MAGGIORE (REPUBLIC OF SAN MARINO)	EUR	1,808,000	100.0000		TIM S.p.A.
TELECOM ITALIA SPARKLE S.p.A. (completion and management of telecommunications services for public and private use)	ROME (ITALY)	EUR	200,000,000	100.0000		TIM S.p.A.
TELECOM ITALIA TRUST TECHNOLOGIES S.r.l. (other operations related to non-classified IT services)	POMEZIA (ROME – ITALY)	EUR	7,000,000	100.0000		TIM S.p.A.
TELECOM ITALIA VENTURES S.r.l. (investment holding company)	MILAN (ITALY)	EUR	10,000	100.0000		TIM S.p.A.
TELECONTACT CENTER S.p.A. (telemarketing services)	NAPLES (ITALY)	EUR	3,000,000	100.0000		TIM S.p.A.

Name	Head Office	Currency	ShareCapital	% ownership	% of voting rights	Held by
TELEFONIA MOBILE SAMMARINESE S.p.A. (development and management of mobile telecommunications plants and services)	BORGO MAGGIORE (REPUBLIC OF SAN MARINO)	EUR	78,000	51.0000		TELECOM ITALIA SAN MARINO S.p.A.
TELENERGIA S.r.l. (import, export, purchase, sale and trade of electricity)	ROME (ITALY)	EUR	50,000	100.0000		TIM S.p.A.
TELSY ELETTRONICA E TELECOMUNICAZIONI S.p.A. (production and sale of equipment and systems for crypto telecommunications)	TURIN (ITALY)	EUR	390,000	100.0000		TIM S.p.A.
TI SPARKLE AMERICAS Inc. (managed bandwidth services)	MIAMI (USA)	USD	10,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE ARGENTINA S.A. (managed bandwidth services)	BUENOS AIRES (ARGENTINA)	ARS	9,998,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE AUSTRIA GmbH (telecommunications services)	VIENNA (AUSTRIA)	EUR	2,735,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE BELGIUM S.P.R.L.—B.V.B.A (telecommunications services)	BRUSSELS (BELGIUM)	EUR	2,200,000	99.9999 0.0001		TELECOM ITALIA SPARKLE S.p.A. TI SPARKLE UK Ltd
TI SPARKLE BOLIVIA SRL (managed bandwidth services)	LA PAZ (BOLIVIA)	BOB	1,747,600	99.9999 0.0001		TELECOM ITALIA SPARKLE S.p.A. TI SPARKLE AMERICAS Inc.
TI SPARKLE BRASIL PARTICIPACOES Ltda (investment holding company)	RIO DE JANEIRO (BRAZIL)	BRL	71,563,866	99.9999 0.0001		TELECOM ITALIA SPARKLE S.p.A. TI SPARKLE AMERICAS Inc.
TI SPARKLE BRASIL TELECOMUNICACIONES Ltda (managed bandwidth services)	RIO DE JANEIRO (BRAZIL)	BRL	69,337,363	99.9999 0.0001		TI SPARKLE BRASIL PARTICIPACOES Ltda TI SPARKLE AMERICAS Inc.
TI SPARKLE BULGARIA EOOD (telecommunications services)	SOFIA (BULGARIA)	BGN	100,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE CHILE S.p.A. (managed bandwidth services)	SANTIAGO (CHILE)	CLP	5,852,430,960	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE COLOMBIA Ltda (managed bandwidth services)	BOGOTA' (COLOMBIA)	COP	5,246,906,000	99.9999 0.0001		TELECOM ITALIA SPARKLE S.p.A. TI SPARKLE AMERICAS Inc.

Name	Head Office	Currency	ShareCapital	% ownership	% of voting rights	Held by
TI SPARKLE CZECH S.R.O.	PRAGUE	CZK	6,720,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(telecommunications services)	(CZECH REPUBLIC)					
TI SPARKLE FRANCE S.A.S.	PARIS	EUR	18,295,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(installation and management of telecommunications services for fixed network and related activities)	(FRANCE)					
TI SPARKLE GERMANY GmbH	FRANKFURT	EUR	25,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(telecommunications services)	(GERMANY)					
TI SPARKLE GREECE S.A.	ATHENS	EUR	368,760	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(telecommunications services)	(GREECE)					
TI SPARKLE ISRAEL Ltd	RAMAT GAN	ILS	1,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(international wholesale telecommunication services)	(ISRAEL)					
TI SPARKLE NETHERLANDS B.V.	AMSTERDAM	EUR	18,200	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(telecommunications services)	(NETHERLANDS)					
TI SPARKLE NORTH AMERICA. INC.	NEW YORK	USD	15,550,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(telecommunications and promotional services)	(USA)					
TI SPARKLE PANAMA S.A.	PANAMA	USD	10,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(managed bandwidth services)						
TI SPARKLE PERU' S.A.	LIMA	PEN	57,101,788	99.9999		TELECOM ITALIA SPARKLE S.p.A.
(managed bandwidth services)	(PERÙ)			0.0001		TI SPARKLE AMERICAS Inc.
TI SPARKLE PUERTO RICO LLC	SAN JUAN	USD	50,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(managed bandwidth services)	(PUERTO RICO)					
TI SPARKLE ROMANIA S.R.L.	BUCHAREST	RON	3,021,560	100.0000		TELECOM ITALIA SPARKLE S.p.A.
(telecommunications services)	(ROMANIA)					
TI SPARKLE RUSSIA LLC	MOSCOW	RUB	8,520,000	99.0000		TELECOM ITALIA SPARKLE S.p.A.
(telecommunications services)	(RUSSIA)			1.0000		TI SPARKLE UK Ltd
TI SPARKLE SINGAPORE PTE. Ltd	SINGAPORE	USD	5,121,120	99.9999		TELECOM ITALIA SPARKLE S.p.A.
(telecommunications services)				0.0001		TI SPARKLE NORTH AMERICA. INC.

Name	Head Office	Currency	ShareCapital	% ownership	% of voting rights	Held by
TI SPARKLE SLOVAKIA S.R.O. (telecommunications services)	BRATISLAVA (SLOVAKIA)	EUR	300,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE SPAIN TELECOMMUNICATIONS SL (telecommunications services)	MADRID (SPAIN)	EUR	1,687,124	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE St. Croix LLC (managed bandwidth services)	VIRGIN ISLANDS (USA)	USD	10,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE SWITZERLAND GmbH (telecommunications services)	ZURICH (SWITZERLAND)	CHF	2,000,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE TURKEY TELEKOMÜNIKASYON ANONIM SIRKETI (telecommunications services)	YENISBONA (ISTANBUL-TURKEY)	TRY	65,000,000	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE UK Ltd (value-added and networking services)	LONDON (UK)	EUR	3,983,254	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TI SPARKLE VENEZUELA C.A. (managed bandwidth service)	CARACAS (VENEZUELA)	VES	10	100.0000		TELECOM ITALIA SPARKLE S.p.A.
TIMB2 S.r.l. (management of television frequency user rights)	ROME (ITALY)	EUR	10,000	99.0000 1.0000		PERSIDERA S.p.A. TIM S.p.A.
TIMVISION S.r.l. (production, co-production, conception and creation of programs, films and audiovisual content, including multimedia and interactive content)	ROME (ITALY)	EUR	50,000	100.0000		TIM S.p.A.
TN FIBER S.r.l. (design, construction, maintenance and supply of optical network access to users in the province of Trento)	TRENTO (ITALY)	EUR	55,918,000	100.0000		TIM S.p.A.
BRAZIL BUSINESS UNIT						
TIM BRASIL SERVIÇOS E PARTICIPAÇÕES S.A. (investment holding company)	RIO DEJANEIRO (BRAZIL)	BRL	7,169,029,859	99.9999 0.0001		TELECOM ITALIA FINANCE S.A. TIM S.p.A.
TIM PARTICIPAÇÕES S.A. (investment holding company)	RIO DEJANEIRO (BRAZIL)	BRL	9,913,414,422	66.5819 0.0324	66,6035	TIM BRASIL SERVIÇOS E PARTICIPAÇÕES S.A. TIM PARTICIPAÇÕES S.A.
TIM S.A. (telecommunications services)	RIO DE JANEIRO (BRAZIL)	BRL	13,476,717,765	100.0000		TIM PARTICIPAÇÕES S.A.

Name	Head Office	Currency	ShareCapital	% ownership	% of voting rights	Held by
OTHER OPERATIONS						
OLIVETTI DEUTSCHLAND GmbH (sale of office equipment and supplies)	NURNBERG (GERMANY)	EUR	25,600,000	100.0000		OLIVETTI S.p.A.
OLIVETTI UK Ltd (sale of office equipment and supplies)	NORTHAMPTON (UK)	GBP	6,295,712	100.0000		OLIVETTI S.p.A.
TELECOM ITALIA CAPITAL S.A. (financial company)	LUXEMBOURG (LUXEMBOURG)	EUR	2,336,000	100.0000		TIM S.p.A.
TELECOM ITALIA FINANCE S.A. (financial company)	LUXEMBOURG (LUXEMBOURG)	EUR	1,818,691,979	100.0000		TIM S.p.A.
TELECOM ITALIA LATAM PARTICIPACOES E GESTAO ADMINISTRATIVA Ltda (provision of telecommunications and representation services)	SAO PAULO (BRAZIL)	BRL	118,925,803	100.0000		TIM S.p.A.
TIAUDIT COMPLIANCE LATAM S.A. (IN LIQUIDATION) (internal auditing services)	RIO DE JANEIRO (BRAZIL)	BRL	1,500,000	69.9996 30.0004		TIM S.p.A. TIM BRASIL SERVICOS E PARTICIPACOES S.A.
TIESSE S.c.p.A. (installation and assistance for electronic, IT, telematics and telecommunications equipment)	IVREA (TURIN-ITALY)	EUR	103,292	61.0000		OLIVETTI S.p.A.
TIM TANK S.r.l. (fund and securities investments)	MILAN (ITALY)	EUR	18,600,000	100.0000		TIM S.p.A.
Associates and joint ventures accounted for using the equity method						
ALFIERE S.p.A. (*) (real estate management)	ROME (ITALY)	EUR	9,250,000	50.0000		TIM S.p.A.
AREE URBANE S.r.l. (IN LIQUIDATION) (real estate management)	MILAN (ITALY)	EUR	100,000	32.6200		TIM S.p.A.
ASSCOM INSURANCE BROKERS S.r.l. (insurance brokerage)	MILAN (ITALY)	EUR	100,000	20.0000		TIM S.p.A.
CLOUDESIRE.COM S.r.l. (design, implementation and marketing of a marketplace platform for the sale of a software as-a-service applications)	PISA (ITALY)	EUR	11,671	(**)		TELECOM ITALIA VENTURES S.r.l.
CONSORZIO ANTENNA COLBUCCARO (installation, management and maintenance ofmetal pylons complete with workstations for device recovery)	ASCOLI PICENO (ITALY)	EUR	121,000	20.0000		PERSIDERA S.p.A.

Name	Head Office	Currency	ShareCapital	% ownership	% of voting rights	Held by
CONSORZIO ANTENNA MONTECONERO (multimedia services)	SIROLO (ANCONA-ITALY)	EUR	51,100	22.2211		PERSIDERA S.p.A.
CONSORZIO E O (IN LIQUIDATION) (training services)	ROME (ITALY)	EUR	30,987	50.0000		TIM S.p.A.
ECO4CLOUD S.r.l. (development, production and sale of innovative products or services with high technological value	RENDE (COSENZA-ITALY)	EUR	19,532	(**)		TELECOM ITALIA VENTURES S.r.l.
KOPJRA S.r.l. (development , production and sale of innovative products or services with high-tech value)	SCHIO (VICENZA-ITALY)	EUR	16,207	22.8491		TELECOM ITALIA VENTURES S.r.l.
MOVENDA S.p.A. (design, construction and diffusion of internet sites, products and computer media)	ROME (ITALY)	EUR	133,333	24.9998		TELECOM ITALIA FINANCE SA
NORDCOM S.p.A. (application service provider)	MILAN (ITALY)	EUR	5,000,000	42.0000		TIM S.p.A.
OILPROJECT S.r.l. (research, development, marketing and patenting of all intellectual property related to technology, information technology and TLC)	MILAN (ITALY)	EUR	13,556	(**)		TELECOM ITALIA VENTURES S.r.l.
PEDIUS S.r.l. (implementation of specialized telecommunications applications, telecommunications services over telephone connections, VoIP services)	ROME (ITALY)	EUR	181	(**)		TELECOM ITALIA VENTURES S.r.l.
TIGLIO I S.r.l. (real estate management)	MILAN (ITALY)	EUR	5,255,704	47.8019		TIM S.p.A.
TIGLIO II S.r.l. (IN LIQUIDATION) (real estate management)	MILAN (ITALY)	EUR	10,000	49.4700		TIM S.p.A.
W.A.Y. S.r.l. (development and sale of geolocation products and systems for security and logistics)	TURIN (ITALY)	EUR	136,383	39.9999		OLIVETTI S.p.A.
WIMAN S.r.l. (development, management and implementation of platforms for social-based Wi-Fi authentications)	MATTINATA (FOGGIA-ITALY)	EUR	22,233	(**)		TELECOM ITALIA VENTURES S.r.l.

Name	Head Office	Currency	ShareCapital	% ownership	% of voting rights	Held by
Other significant investments						
CONSORZIO ANTENNA TOLENTINO (installation, management and maintenance of pylons complete with workstation for device recovery)	RECANATI (MACERATA-ITALY)	EUR	86,000	16.6674		PERSIDERA S.p.A.
CONSORZIO EMITTENTI RADIOTELEVISIVE (broadcasting activities)	BOLOGNA (ITALY)	EUR	119,309	18.6600		PERSIDERA S.p.A.
CONSORZIO HEALTH INNOVATION HUB (IN LIQUIDATION) (development of the market for systems and services for the sector social and health)	TRENTO (ITALY)	EUR	48,000	12.5000		TIM S.p.A.
DAHLIA TV S.p.A. (IN LIQUIDATION) (pay-per-view services)	ROME (ITALY)	EUR	11,318,833	10.0800		TIM S.p.A.
FIN.PRIV. S.r.l. (financial company)	MILAN (ITALY)	EUR	20,000	14.2900		TIM S.p.A.
IGOON. S.r.l. (development of mobile platforms and applications able to provide user with innovative solutions for organizing and sharing all their digital content)	NAPLES (ITALY)	EUR	16,498	14.2805		TELECOM ITALIA VENTURES S.r.l
INNAAS S.r.l. (design, development and sale of high-tech software and hardware)	ROME (ITALY)	EUR	108,700	15.2548		TELECOM ITALIA VENTURES S.r.l.
ITALBIZ.COM Inc. (internet services)	DELAWARE (USA)	USD	4,721	19.5000		TIM S.p.A.
MIX S.r.l. (internet service provider)	MILAN (ITALY)	EUR	1,000,000	11.0937		TIM S.p.A.

(*) Joint Venture.

(**) Associates over which TIM S.p.A., directly and indirectly, exercise significant influence pursuant to IAS 28 (Investments in Associates and Joint Ventures).

Exhibit 4.2

LONG TERM INCENTIVE PLAN 2018
REGULATIONS

TIM S.p.A.
Registered Office in Milan at Via Gaetano Negri 1
General Administration and Secondary Office in Rome at Corso d'Italia 41
PEC (Certified electronic mail) box: telecomitalia@pec.telecomitalia.it
Share capital 11,677,002,855.10 euros fully paid-up
Tax Code/VAT Registration Number and
Milan Business Register Number 00488410010

LONG TERM INCENTIVE PLAN 2018
REGULATIONS

1. INTRODUCTION

In implementation of the resolutions made on 24 April 2018 by the Shareholders' Meeting of Telecom Italia S.p.A. (with registered office in Milan, at 2 Piazza degli Affari, tax code and registration number in the Milan Business Register 00488410010, also referred to as "Telecom Italia", the "Company" and the "Issuer"), based on the corresponding Information Document, these rules (the "Rules") have been drawn up for the "2018-2020 Performance Share Plan" (the "Plan").

The section containing the Definitions is in annex 1.

2. ESSENTIAL ELEMENTS OF THE PLAN

The Plan prescribes the allocation to the Beneficiaries, free of charge, of Performance Shares corresponding to an even maximum number of Shares, effective transfer of which shall take place to a variable extent, on the Vesting Date, depending on the level to which the Performance Parameters have been achieved.

The Performance Shares may not be transferred or subjected to any limitations or constitute the object of any other acts to dispose thereof by the Beneficiaries during the Vesting Period.

The Shares transferred to the Beneficiaries on the Vesting Date will be subject to Lock-up, although the Beneficiary will be entitled to sell a number of Shares sufficient to ensure that all the costs connected to the transaction are covered, including taxes, commissions and other expenses borne by the Beneficiary, in accordance with the procedure indicated in due course by the Company at the time the Shares are allocated.

In those cases specified in the TIM policy, the Shares transferred shall be subject to a contractual clawback mechanism that may be activated in the three years following payment of the variable remuneration, if said disbursement occurred following wilful misconduct or gross negligence on the part of the Executives concerned, or in case of error in the formulation of data which resulted in the restatement of the information in the financial statements.

If extraordinary situations involving the Company should arise, or if there are changes to the regulatory framework that impact on the Plan, the Board of Directors shall be entitled, based on a favourable opinion of the Nomination and Remuneration Committee and without the need for further involvement of the Shareholders' Meeting, to make any amendments and additions to the Regulations needed to maintain unchanged the substantial and economic content of the Plan, within the limits permitted by the decisions taken by the Shareholders' Meeting on 24 April 2018 (including the maximum number of Shares to service the Plan) and by the law applicable from time to time.

3. DETERMINATION OF THE AMOUNT OF REMUNERATION BASED ON FINANCIAL INSTRUMENTS, OR CRITERIA FOR THE DETERMINATION OF SAID REMUNERATION

The number of Performance Shares discretionally awarded to each Beneficiary on target at the moment the Plan is assigned (and resulting from the individual Assignment Scorecard) shall correspond to a percentage of the Beneficiary's Base Salary expressed in Shares at their Normal Price on that date, based on:

– three years, when first assigned;

– two years, if subsequently assigned, up to the end of the month of January of the second year of Vesting (2019);

– one year, in case of assignment from the month of February of the second year of Vesting (2019) up to the end of the month of January of the third year of Vesting (2020).

The Plan may no longer be assigned, wholly or in part, from the month of February 2020.

4. PERFORMANCE OBJECTIVES

The Performance Shares shall accrue in variable number, dependent on the degree to which the Performance Parameters have been achieved, as ascertained by the Board of Directors at the meeting to approve the consolidated financial statements of the Group at 31 December 2020.

The Performance Parameters are as follows:

Share performance (weight: 70%)

– calculated

  - from 1 January 2018 for the assignees of Performance Shares in the initial allocation; from 1 January 2019 for subsequent assignees up to 31 January 2019; from 1 January 2020 for assignees from 1 February 2019 to 31 January 2020,
  - up to 31 December 2019 in the event of early termination maintaining assignment rights, and up to 31 December 2020 in the remaining cases,

  considering the average of the official Share prices recorded on the MTA electronic share market organised and managed by Borsa Italiana S.p.A. during the quarters prior to period start and end, rounded to two decimal places;

– compared to the average stock market performance, calculated using similar methods and over the same period by the shares issued by Deutsche Telekom AG, Vodafone Group PLC, Telefonica SA, Orange SA, BT Group PLC, Telenor ASA, Swisscom AG, Telia Co AB, Koninklijke KPN NV, Proximus SADP, Elisa OYJ (the "Peer Basket"), in the respective main listing markets *.

With regard to this Performance Parameter, the payout metric envisages:

– minimum, if the performance of TIM ordinary shares equals the average performance of the basket of peers

– Target, if the performance of TIM ordinary shares equals the average performance of the basket of peers plus 10%

– maximum, if the performance of TIM ordinary shares equals the average performance of the basket of peers plus 20%, provided that the performance of the TIM ordinary shares has been positive in the period, in absolute terms

For intermediate performance levels, a linear interpolation will be calculated:

  - between minimum and target
  - between target and maximum, provided that the performance of the TIM ordinary shares has been positive in the period.

Equity Free Cash Flow (weight 30%)

represented by cumulative net cash flow in the three years, as per the 2018-2020 plan guidance, before the dividend and the investment in frequencies, and with the same perimeter, i.e. without including the effect of acquisitions and disposals of shareholdings (M&As) and with the same accounting standards.

The target value will be recalculated—over the period of the plan—excluding the impact connected with changes to the consolidation area, exchange rates and accounting standards. This will be carried out with reference to the years 2018, 2019 and 2020 for those assigned Performance Shares during the initial allocation; to the years 2019 and 2020 for subsequent assignees to 31 January 2019; to the year 2020 for assignees from 1 February 2019 and until 31 January 2020. The year 2020 is excluded in the event of early termination with maintenance of assignment rights.

The payout metric envisages comparing the cumulative final figure, net of the sterilisations proposed by the Committee to ensure they are operationally meaningful, with the objective in the 2018-2020 Group Strategic Plan, announced on 6 March 2018 as equal to 4.5 billion euros, recalculated as above, assuming linear progression in the three financial years (the "Objective") and:

– minimum payment where 90% of the Objective is achieved;

– target where 105% of the Objective is achieved;

– maximum where 115% of the Objective is achieved.

The number of Performance Shares accrued when the value is ascertained at intermediate levels between those listed above will be calculated by linear interpolation.

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* if the shares of one of the companies in the Peer Basket should be delisted, they shall be removed from the Peer Basket from the start of the LTI plan reference period.

5. NATIONAL INSURANCE AND TAX REGIME

The national insurance and tax contributions relating to the bonus shall remain the responsibility of the Beneficiaries and/or the Company, for those contributions for which they are respectively responsible, according to the regulations applicable at the time.

The national insurance and tax regime of Beneficiaries of the Plan who are domiciled abroad for tax purposes shall be that of the corresponding tax jurisdiction, without prejudice to any applicable international agreements on double taxation.

The tax regime applicable to the successors and assignees of a Beneficiary is the regime of inheritance mortis causa.

6. DESCRIPTION OF THE EFFECTS PRODUCED BY THE TERMINATION OF EMPLOYMENT

The Performance Shares will be extinguished definitively and without any form of restoration in case of (i) the death of the Beneficiary or (ii) if their employment by/collaboration with the Company (or with a Subsidiary Company, even if not the Group company which employed the Beneficiary at the time of allocation of the Plan) should cease for any reason during the first two financial years (2018 and 2019) of the Vesting Period.

The circumstance of the non-renewal of Amos Genish as Chief Executive Officer when the 2017-2019 Board of Directors was renewed as an effect of its termination and early reappointment by the Shareholders' Meeting held on 4 May 2018 having been overcome by events within the Company, it remains the case, in any event, that in case of the premature death or termination of the employment/collaboration (i) by/with the Company of the Chief Executive Officer, or (ii) by/with the Company or a Subsidiary Company of the remaining Beneficiaries, after 1 January 2020, and always provided that said departing individuals qualify as good leavers, then the Performance Shares, reduced by a number corresponding to a whole year of the total Vesting Period, shall potentially Vest.

Those whose employment by/collaboration with the Company (or a Subsidiary) ceases due to (i) retirement; (ii) consensual termination with maintenance of the Performance Shares (in any case subject to the Beneficiary's acceptance of a non-competition agreement towards the Company for at least 12 months); (iii) placement outside the perimeter of the Group, for any reason, of the company the beneficiary is employed by/collaborates with; (iv) dismissal for justified objective reasons; (v) total and permanent invalidity qualify as good leavers.

After Vesting, the circumstances of the employment by/collaboration with the Company (or a Subsidiary) shall only have relevance for the purposes of the application of the clawback regulation.

7. COMMUNICATIONS AND DISPUTES

Communications to the Beneficiaries pursuant to these Rules shall be made in writing, by ordinary post or by electronic mail.

Communications shall be made preferably to the work address or company e-mail address, or at the domicile and/or private e-mail address indicated by the Beneficiaries. For this purpose, it is the responsibility of the Beneficiaries to promptly communicate any changes to their domicile or private e-mail address to the HRO department.

Any disputes arising, dependent or in any way connected to the Plan are devolved to the sole jurisdiction of the Milan judicial authorities.

ANNEX 1

DEFINITIONS

- Chief Executive Officer—The Chief Executive Officer of the Company, Amos Genish.
- Shares—The ordinary shares of the Company, without par value, listed on the MTA electronic share market organised and managed by Borsa Italiana S.p.A.
- Base Salary—The gross annual fixed remuneration the Beneficiary is entitled to as an employee, to which is added the fixed sum pursuant for the Chief Executive Officer to art. 2389, subsection 3 of the Italian Civil Code.
- Beneficiaries—The Chief Executive Officer and the senior executives working for the Company or the Subsidiaries, who will be offered Performance Shares, as discretionally identified by the Board of Directors.
- Subsidiary Companies—Each of the companies that are at any given time directly or indirectly controlled by TIM, pursuant to Article 2359 of the Italian Civil Code.
- Group—TIM and the Subsidiary Companies.
- Lock-up—The period of two calendar years in which the Shares obtained as vested Performance Shares remain unavailable, non-transferable and blocked in the share deposit accounts created for this purpose by the Issuer, to which the Shares will be credited upon Vesting (although the Beneficiary can exercise the Shares' administrative and economic rights). The premature death of the Beneficiary excludes and/or releases the Shares from Lock-up.
- Vesting Date (of the Performance Shares)—The date the board approves the consolidated financial statements of the Group at 31 December 2020, with the concurrent ascertainment of the degree to which the Performance Parameters have been achieved.
- The Performance Parameters are: (i) the performance of the Shares on the stock market in the Vesting Period compared to a basket of securities issued by a panel of peers (weight: 70%), and (ii) the cumulative Equity Free Cash Flow in the Vesting Period, as set out in the 2018-2020 Strategic Plan (weight 30%) in the terms better described in point 4.
- Performance Shares—The Shares that are pledged to be allocated free of charge to the Beneficiaries on the Vesting Date in a number commensurate with the Base Salary of the individual Beneficiary, and varying from a minimum to a maximum depending on the degree to which the Performance Parameters have been achieved.
- Vesting Period—the period of time between the moment the Plan is assigned and the Vesting Date of the Performance Shares, corresponding to the 2018, 2019 and 2020 financial years.
- Adhesion Document—The specific document to be delivered by the Company to the Beneficiaries, with annexed Regulations constituting an integral part thereof, signature and return of which by the Beneficiaries to the Company shall constitute full and unconditional acceptance of adhesion to the Plan to all effects.
- Normal Value—The arithmetic mean of the official Share price recorded in the period from the thirty-first ordinary calendar day before the assignment date to the day before said date (inclusively) on the MTA electronic share market organised and managed by Borsa Italiana S.p.A., calculated using as a denominator only those days to which the prices used for the basis of the calculation apply, rounded to two decimal places.

EXHIBIT 12(a)

Certification by the Chief Executive Officer of TIM S.p.A.

I, Luigi Gubitosi, certify that:

1. I have reviewed this annual report on Form 20-F of TIM S.p.A.;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The company's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:

   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

   (a) all significant deficiencies in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial data and have identified for the company's auditors any material weaknesses in internal controls; and

   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

By: /s/ LUIGI GUBITOSI

Name: Luigi Gubitosi
Title: Chief Executive Officer

April 16, 2019

EXHIBIT 12(b)

Certification by the Head of Administration, Finance and Control

of TIM S.p.A.

I, Piergiorgio Peluso, certify that:

1. I have reviewed this annual report on Form 20-F of TIM S.p.A.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The company's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
   (a) all significant deficiencies in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial data and have identified for the company's auditors any material weaknesses in internal controls; and
   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

By: /s/ PIERGIORGIO PELUSO

Name: Piergiorgio Peluso
Title: Head of Administration, Finance and Control

April 16, 2019

EXHIBIT 13.1

906 CERTIFICATION

April 16, 2019

Securities and Exchange Commission
450 Fifth Street, N.W.
Washington, D.C. 20549

Ladies and Gentlemen:

The certification set forth below is being submitted in connection with the TIM S.p.A. Annual Report on Form 20-F for the year ended December 31, 2018 (the "**Report**") for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the "**Exchange Act**") and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Luigi Gubitosi, the Chief Executive Officer, and Piergiorgio Peluso, the Head of Administration, Finance and Control, of TIM S.p.A., each certifies that, to the best of his knowledge:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of TIM S.p.A.

By: /s/ LUIGI GUBITOSI

Name: Luigi Gubitosi
Title: Chief Executive Officer

By: /s/ PIERGIORGIO PELUSO

Name: Piergiorgio Peluso
Title: Head of Administration, Finance and Control

Exhibit 15.1

PricewaterhouseCoopers SpA
Via Monte Rosa, 91
20149 Milano
Italia

Tel: +39 02 77851
Fax: +39 02 7785240
www.pwc.com

Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Milan, 16 April 2019

Commissioners:

We have read the statements made by TIM SpA, which we understand will be filed with the Securities and Exchange Commission, pursuant to Item 16F *"Change In Registrant's Certifying Accountant"* of TIM SpA's annual report on Form 20-F dated 16 April 2019.
We agree with the statements concerning our Firm contained therein.

Very truly yours,

/s/ PricewaterhouseCoopers SpA