

TIM S.p.A.  
Form 20-F  
April 16, 2018  
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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, 2017**

**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)**

**Piergiorgio PELUSO**

**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:**

<b>Title of each class</b>	<b>Name of each exchange on which registered</b>
American Depositary Shares, each representing 10 Ordinary Shares (the <b>Ordinary Share ADSs</b> )	The New York Stock Exchange
Ordinary Shares (the <b>Ordinary Shares</b> )	The New York Stock Exchange*
	The New York Stock Exchange

American Depositary Shares, each representing 10 Savings Shares (the <b>Savings Share ADSs</b> )	
Savings Shares (the <b>Savings Shares</b> )	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

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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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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 external transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP Standards Board      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.).  
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.



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**Introduction**

**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, 2017 of the TIM Group (including the notes thereto) included elsewhere herein.

**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 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;

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**Introduction**

- the impact of regulatory decisions and changes in the regulatory environment in Italy, Brazil and other countries in which we operate;
- the impact of political developments in Italy, Brazil and other countries in which we operate;
- 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 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.

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**Key Definitions**

**KEY DEFINITIONS**

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

<b>EU</b>	means the European Union.
<b>IASB</b>	means the International Accounting Standards Board.
<b>IFRS</b>	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 ).
<b>Ordinary Shares</b>	means the Ordinary Shares, of TIM.
<b>Parent, Telecom Italia, TIM and Company</b>	means Telecom Italia S.p.A., also named TIM S.p.A.
<b>Savings Shares</b>	means the Savings Shares, of TIM.
<b>TIM Group and Group</b>	means the Company and its consolidated subsidiaries.
<b>Vivendi</b>	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 July 27, 2017, the Board of Directors of TIM S.p.A. acknowledged the start, under Italian law, of the Direction and Coordination by Vivendi S.A..

On September 13, 2017, the Consob (the public authority responsible for regulating the Italian financial markets) communicated that it considered that Vivendi exercises de facto control over TIM pursuant to Italian rules and regulations .

Therefore, this Annual Report has been prepared in accordance with the relevant provisions, indicating Vivendi S.A. as the Controlling Entity and TIM S.p.A. as the company subject to direction and coordination.

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-infrastructure and FWA Fixed Wireless Accesses. Broadband retail accesses are included as part of physical accesses;
- **Mobile accesses:** number of lines.

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**Item 1. Identity of Directors, Senior Management and Advisers /**

**Item 2. Offer Statistics and Expected Timetable**

**PART I**

**Item 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS**

Not Applicable

**Item 2. OFFER STATISTICS AND EXPECTED TIMETABLE**

Not Applicable



**Table of Contents****Item 3. Key Information****Risk Factors****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 2018-2020 Strategic Plan (the **2018-2020 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<sup>1</sup>:

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 March 6, 2018, TIM's Board of Directors approved the 2018-2020 Strategic Plan (the **Plan**). The Plan provides for the digitalization of all processes to dramatically enhance the digital experience for best-in-class customer engagement and to create an effective digital journey. Customer experience is expected to be improved by offering one single and intuitive interface that will allow for more customized, multi-channel interaction, thanks to a renewed IT architecture. The above implies a fully digital model of relationship with the client, based on the use of Big Data and advanced analytics to sustain the customer base and capture new growth opportunities, contributing to the consolidation of TIM's leadership in the Fixed and Mobile segments.

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;
- the impact of political developments in Italy, Brazil and other countries in which we operate;
- 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;

<sup>1</sup> CoSO Report-ERM Integrated Framework 2004.

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**Item 3. Key Information**

**Risk Factors**

- 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. Economic recovery in the Euro Area has been uneven. Economic conditions in the Italian economy have shown improvement, however, uncertainty persists 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. The Italian economic recession has ended and according to government estimates economic growth is estimated at 1.5% for 2017 and 1.5% for 2018. Gross fixed investment, household consumption, exports and employment have shown improvement. However, Italian GDP growth continues to lag the Eurozone average. Uncertainty related to the outcome of the political elections and the announced reductions in the ECB bond buying program may raise costs for government borrowing, while the Fiscal Compact obligations to lower the debt-to-GDP ratio will likely prevent any expansionary fiscal policy measures in the years to come.

In Brazil economic growth has resumed, after declining for eight consecutive quarters. Initially driven primarily by improvements in the agriculture sector, Brazil's recovery now appears to be positively impacted by growth across various sectors. GDP is expected to grow by 1.1% in 2017 and 2.0% in 2018 and inflation has fallen to below the target set by the Brazilian central bank. This has resulted in rising real incomes and lower interest rates, which are expected to further support the recovery. Unemployment has declined, however, consumer and business confidence still remain sensitive to political developments.

Despite the positive trend, continuing uncertainty about global economic conditions poses a risk as consumer and business customers postpone spending in response to tighter credit, negative financial news (including high levels of unemployment) or declines in income or asset values, which could have a material negative effect on the demand for our products and services. Economic difficulties in the credit markets and other economic conditions may reduce the demand for or the timing of purchases of our products and services. A loss of customers or a reduction in purchases by our current customers could have a material adverse effect on our financial condition, results of operations and cash flow and may negatively affect our ability to meet our targets. Other factors that could influence customer demand include access to credit, consumer confidence and other macroeconomic factors.

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**Table of Contents****Item 3. Key Information****Risk Factors*****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 7.1.1. 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 ( **Alt Net** ), such as Open Fiber and 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 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 transformation with respect to competition. Since December 31, 2016, Wind Tre has become operative. Wind Tre resulted from the merger of Wind and H3G, which was authorized by regulatory bodies subject to certain structural corrective measures , including the sale of frequencies and signature of a roaming contract, and which cleared the way for French operator Iliad to enter the Italian market as the fourth mobile infrastructured player alongside TIM, Vodafone and Wind Tre. Iliad is expected to enter the Italian market in 2018.

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.

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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:
- MISE (Ministero dello Sviluppo Economico) competition for additional spectrum assignment;
  - availability and selection of cutting edge technology from our network/platforms and device vendors.



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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;

- fulfilment 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 (considering also the results of the March 4, 2018 election) 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 State is in a position to exert certain powers with respect to us.***

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).

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Following enactment of such regulation, art. 3 of Presidential Decree n. 85 of March 25, 2014 identified the following as strategic assets in the communications sector:

- (1) dedicated networks and access to a public network for final customers in connection with metropolitan networks, service routers and long-distance networks;
- (2) assets used for the provision of access for final customers to services that fall within the obligations of universal service and broadband and ultrabroadband services;
- (3) dedicated elements, even if not in exclusive use, for connectivity (phone, data, video), security, control and management concerning fixed telecommunication access networks.

Presidential Decree n. 86 of March 25, 2014 sets out the procedures for handling of special powers in the communications sector.

As a result, the rules presently in force provide for:

- the power of the Italian Government 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 the 15-day period from the notice of the purchase, within which conditions may be imposed, or the power to oppose the initiative exercised, voting rights (and any rights other than the property rights) connected to shares whose sale entails the transfer of control, may be suspended. The same rights may be suspended in the case of any non-compliance with or breach of the conditions imposed on the purchaser, for the whole of the period in which the non-compliance or breach persists. Any resolutions adopted with the determining vote of said shares or holdings, as well as the resolutions or acts adopted that breach or do not comply with the conditions imposed, will be null and void;
- veto power by the Italian Government (including through the imposition of prescriptions or conditions) over any resolution, act or transaction that has the effect of modifying the ownership, control or availability of such strategic assets or changing their destination, including resolutions of merger, demerger, transfer of registered office abroad, transfer of the company or business units which contain the strategic assets, or their assignment by way of guarantee. Resolutions or acts adopted breaching such prescriptions are null and void. The Government may also order the company and any other party to restore the antecedent situation at their own expense.

The exercise of such powers, or the right or ability to exercise such powers, could make a change of control transaction with respect to TIM (whether by merger or otherwise) more difficult to achieve, if at all, or discourage certain 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), that will be 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 GDPR requirements, facilitated by the strength of present data protection operative model yet adopted by the Company.

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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. See Item 4. Information on the TIM Group 4.3. Regulation 4.3.11. Privacy and Data Protection .

***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.

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*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, 2017, we had, on a consolidated basis, recognized potential liabilities of 461 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 entered into a new union agreement on September 7, 2015. In addition, on September 21, 2015, which expired in December 2016 and October 27, 2015, we entered into agreements that provide for voluntary relocation and employment support schemes. On November 8, 2017, we signed another agreement related to voluntary dismissals.

The efforts undertaken with respect to this restructuring have continued in 2017. Such agreements provides for a number of different measures to enable us to manage our workforce in line with our business plan and include employment support schemes (e.g., the introduction of reduced hours and wages), known as *contratti di solidarietà* , as well voluntary relocation, early retirement measures and re-training.

With respect to the 2018-2020 Strategic Plan, we are aiming to continue a transformation in order to facilitate stable growth in the market.

Therefore, we are currently in the process of executing the 2018 - 2020 Industrial Plan, presented and discussed with Trade Unions on March 13, 2018. In this context, the guidelines related to personnel are to adopt measures aimed at supporting our reorganization and the transformation in the announced DigiTIM .



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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, 2017, our consolidated gross financial debt was 32,864 million euros, compared to 34,525 million euros on December 31, 2016. Our consolidated net financial debt was 26,091 million euros as of December 31, 2017, compared to 25,955 million euros on December 31, 2016. 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, 2017 and December 31, 2016, respectively, 48,591 million euros (87.4 percent of total non-current operating assets) and 46,948 million euros (85.1 percent of total non-current operating assets); and
- Outside of Italy: as of December 31, 2017 and December 31, 2016, respectively, 7,032 million euros (12.6 percent of total non-current operating assets) and 8,197 million euros (14.9 percent of total non-current operating assets). Non-current operating assets outside of Italy are primarily denominated in Brazilian Reais.

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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, as of December 31, 2017 and December 31, 2016, 29 percent of our consolidated gross debt was subject to the accrual of interest at floating rates, net of derivative instruments hedging such risks. As of December 31, 2017, and December 31, 2016, we had derivative contracts in place for the sole management of our interest rate risk, including interest rate swaps, for notional amounts of 5,919 million euros and 4,919 million euros, respectively. 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 reflects, 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.

On June 23, 2016, the United Kingdom (the **U.K.**) held a referendum in which voters approved an exit from the European Union (the **EU**), commonly referred to as **Brexit**. The potential impact of Brexit will depend, in part, on the outcome of tariff, trade, regulatory and other negotiations that remain ongoing. As a result of the referendum, global markets have been adversely impacted, including an initial sharp decline in the value of the British pound relative to the U.S. dollar and the euro. Since late 2017, the British pound has recovered some of its value relative to the U.S. dollar and the euro, while the U.S. dollar has declined against various other currencies, highlighting ongoing volatility in global currency exchange rates. Brexit-related uncertainty during the negotiation period and the electoral success of anti-EU movements in other EU countries, could result in further instability in global financial markets and uncertainty with respect to national laws and regulations in Europe. Brexit, as well as potential threats by other EU members to exit the EU, could adversely affect our business, financial condition, operating 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

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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.

In December 2015, we began the implementation of a new model that includes a number of structural changes in the provision of our bottleneck access services (on both copper and fiber networks), aimed at meeting the requirements and recommendations issued by AGCom, AGCM, the Supervisory Board (Organo di Vigilanza per la Parità di Accesso) and the Supreme Administrative Court (Consiglio di Stato) (the **New Equivalence Model** ). The New Equivalence Model, will improve the current equality of access guarantees by means of a greater symmetry in organization, processes, information systems and databases for the provision of bottleneck access services in order to decrease future regulatory, competition and litigation risks.

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.

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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 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.



**Table of Contents****Item 3. Key Information****Exchange Rates****3.2 EXCHANGE RATES**

We publish our consolidated financial statements in euros. References to **euro**, **€**, **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.\$ 1.2022, 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 29, 2017.

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 following table sets forth for the years 2013 to 2017 and for the beginning of 2018 certain information regarding the Noon Buying Rate for Dollars expressed in U.S.\$ per 1.00.

<b>Calendar Period</b>	<b>High</b>	<b>Low</b>	<b>Average(1)</b>	<b>At Period end</b>
2013	1.3816	1.2774	1.3281	1.3779
2014	1.3927	1.2101	1.3297	1.2101
2015	1.2015	1.0524	1.1096	1.0859
2016	1.1516	1.0375	1.1072	1.0552
2017	1.2041	1.0416	1.1298	1.2022
2018 (through April 6, 2018)	1.2488	1.1922	1.2288	1.2274

<b>Monthly Rates</b>	<b>High</b>	<b>Low</b>	<b>Average(1)</b>	<b>At Period end</b>
November 2017	1.1936	1.1577	1.1743	1.1898
December 2017	1.2022	1.1725	1.1836	1.2022
January 2018	1.2488	1.1922	1.2197	1.2428
February 2018	1.2482	1.2211	1.2340	1.2211
March 2018	1.2440	1.2216	1.2334	1.2320
2018 (through April 6, 2018)	1.2292	1.2230	1.2269	1.2274

(1) Average of the rates for each period.

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 .

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**Item 3. Key Information**

**Selected Financial And Statistical Information**

**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, 2017, 2016, 2015, 2014 and 2013, 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 2017, 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, 2017, described in the Note Accounting Policies 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.

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	2017 (millions of U.S. dollars, except percentages, ratios, employees and per share amounts)(1)	Year ended December 31,				
		2017(*)	2016(*)	2015(*)	2014(*)	2013(*)
(millions of euros, except percentages, ratios, employees and per share amounts)						
<b>Separate Consolidated Income Statement Data:</b>						
<b>Revenues</b>	<b>23,837</b>	<b>19,828</b>	<b>19,025</b>	<b>19,719</b>	<b>21,574</b>	<b>23,443</b>
<b>Operating profit (loss)</b>	<b>3,956</b>	<b>3,291</b>	<b>3,722</b>	<b>2,963</b>	<b>4,529</b>	<b>2,752</b>
<b>Profit (loss) before tax from continuing operations</b>	<b>2,136</b>	<b>1,777</b>	<b>2,799</b>	<b>453</b>	<b>2,350</b>	<b>570</b>
<b>Profit (loss) from continuing operations</b>	<b>1,547</b>	<b>1,287</b>	<b>1,919</b>	<b>50</b>	<b>1,420</b>	<b>(556)</b>
Profit (loss) from Discontinued operations/Non-current assets held for sale			47	611	541	341
<b>Profit (loss) for the year</b>	<b>1,547</b>	<b>1,287</b>	<b>1,966</b>	<b>661</b>	<b>1,961</b>	<b>(215)</b>
Profit (loss) for the year attributable to Owners of the Parent(2)	1,348	1,121	1,808	(70)	1,351	(659)
<b>Capital Expenditures</b>	<b>6,854</b>	<b>5,701</b>	<b>4,876</b>	<b>5,197</b>	<b>4,984</b>	<b>4,400</b>
<b>Financial Ratios:</b>						
Operating profit (loss)/Revenues (ROS)(%)	16.6%	16.6%	19.6%	15.0%	21.0%	11.7%
Ratio of earnings to fixed charges(3)	2.06	2.06	2.65	1.18	2.18	1.29
<b>Employees, average salaried workforce in the Group, including personnel with temporary work contracts:</b>						
Employees (excluding employees relating to the consolidated companies considered as Discontinued operations/Non-current	54,946	54,946	57,855	61,553	59,285	59,527

assets held for sale) (average number)

Employees relating to the consolidated  
companies considered as Discontinued  
operations/Non-current assets held for  
sale (average number)

2,581	15,465	15,652	15,815
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**Basic and Diluted earnings per Share****(EPS)(4):**

<b>Ordinary Share</b>	<b>0.06</b>	<b>0.05</b>	<b>0.08</b>	<b>0.06</b>	<b>(0.03)</b>
<b>Savings Share</b>	<b>0.07</b>	<b>0.06</b>	<b>0.09</b>	<b>0.07</b>	<b>(0.03)</b>

**Dividends:**

per Ordinary Share (5)

per Saving Share (5)	0.033	0.0275	0.0275	0.0275	0.0275	0.0275
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**Table of Contents****Item 3. Key Information****Selected Financial And Statistical Information**

	2017 (millions of U.S. dollars, except employees)(1)	2017	As of December 31, (millions of euros, except employees)			
		2016	2015	2014	2013	
<b>Consolidated Statement of Financial Position</b>						
<b>Data:</b>						
<b>Total Assets</b>	<b>82,691</b>	<b>68,783</b>	<b>70,446</b>	<b>71,268</b>	<b>71,596</b>	<b>70,264</b>
<b>Equity:</b>						
Equity attributable to owners of the Parent	25,916	21,557	21,207	17,554	18,068	16,985
Non-controlling interests	2,676	2,226	2,346	3,695	3,516	3,086
<b>Total Equity</b>	<b>28,592</b>	<b>23,783</b>	<b>23,553</b>	<b>21,249</b>	<b>21,584</b>	<b>20,071</b>
<b>Total Liabilities</b>	<b>54,099</b>	<b>45,000</b>	<b>46,893</b>	<b>50,019</b>	<b>50,012</b>	<b>50,193</b>
<b>Total Equity and liabilities</b>	<b>82,691</b>	<b>68,783</b>	<b>70,446</b>	<b>71,268</b>	<b>71,596</b>	<b>70,264</b>
<b>Share capital(6)</b>	<b>13,930</b>	<b>11,587</b>	<b>11,587</b>	<b>10,650</b>	<b>10,634</b>	<b>10,604</b>
<b>Net financial debt(7)</b>	<b>31,367</b>	<b>26,091</b>	<b>25,955</b>	<b>28,475</b>	<b>28,021</b>	<b>27,942</b>

**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)	59,429	59,429	61,229	65,867	66,025	65,623
Employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale (number at year-end)				16,228	16,420	16,575

	2017	As of December 31, (thousands)			
	2016	2015	2014	2013	
<b>Statistical Data:</b>					
<b>Domestic (Italy) Business Unit</b>					
Physical accesses(8)	18,995	18,963	19,209	19,704	20,378
<i>Of which physical accesses (retail)</i>	<i>11,044</i>	<i>11,285</i>	<i>11,742</i>	<i>12,480</i>	<i>13,210</i>

Broadband accesses	10,154	9,206	8,890	8,750	8,740
<i>Of which retail broadband accesses</i>	<i>7,641</i>	<i>7,191</i>	<i>7,023</i>	<i>6,921</i>	<i>6,915</i>
Mobile lines	30,755	29,617	30,007	30,350	31,221
<b>Brazil Business Unit</b>					
Mobile lines(9)	58,634	63,418	66,234	75,721	73,431

(\*) 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 2017 have been converted into U.S. dollars using the Euro/Dollar Exchange Rate in effect on December 29, 2017 of 1.00 = 1.2022 U.S.\$.

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

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**Item 3. Key Information**

**Selected Financial And Statistical Information**

(3) For purposes of calculating the ratio of earnings to fixed charges :

· Earnings is calculated by adding:

profit (loss) before tax from continuing operations;

fixed charges (as defined below);

amortization of capitalized interest and debt issue discounts or premiums;

dividends from associates and joint ventures accounted for using the equity method;

share of losses of associates and joint ventures accounted for using the equity method and then subtracting:

capitalized interest for the applicable period; and

share of earnings of associates and joint ventures accounted for using the equity method.

· Fixed charges is calculated by adding:

interest expenses (both expensed and capitalized);

issue costs and any original debt issue discounts or premiums; and

an estimate of the interest within rental expense for operating leases. This component is estimated to equal 1/3 of rental expense, which is considered a reasonable approximation of the interest factor.

(4) 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, 2017
- 15,039,128,128 for the year ended December 31, 2016;
- 14,889,773,009 for the year ended December 31, 2015;
- 14,851,386,060 for the year ended December 31, 2014; and
- 13,571,392,501 for the year ended December 31, 2013.

Savings Shares was:

- 6,027,791,699 for the years ended December 31, 2017 and 2016;
- 6,026,677,674 for the year ended December 31, 2015;
- 6,026,120,661 for the years ended December 31, 2014 and 2013.

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.

(5) Subject to approval at the Annual Shareholders Meeting to be held on April 24, 2018. TIM's dividend coupons for its Savings Shares for the year ended December 31, 2017, will be clipped on June 18, 2018 and will be payable from June 20, 2018.

(6) 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.

(7) 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 .

(8) Excludes full-structured OLOs and FWA-Fixed Wireless Access.

(9) Starting from 2014, data also includes company lines (active SIM cards used by the TIM Brasil group and its employees). The comparative data for 2013 have been appropriately restated.

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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, 2017.

Year ended December 31,	Dividends on Ordinary Shares		Dividends on Savings Shares		
	Euros per Share	U.S. Dollars (millions of euros)	Euros per Share	U.S. Dollars per Share(1)	(millions of euros)
2013			0.0275	0.0381	165.72
2014			0.0275	0.0307	165.72
2015			0.0275	0.0310	165.76
2016			0.0275	0.0307	165.76
2017(2)			0.0275	0.0338	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, 2017, Euro amounts have been translated into U.S. dollars using the Noon Buying Rate in effect on April 6, 2018.

(2) Subject to approval at the Annual Shareholders Meeting to be held on April 24, 2018, TIM's dividend coupons for its Savings Shares for the year ended December 31, 2017, will be clipped on June 18, 2018 and will be payable from June 20, 2018.

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 .

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**Dividends**

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 Depository, in its capacity as holder of record of the Ordinary Shares and Savings Shares, as the case may be, will satisfy these requirements.

The Depository, 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 .

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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 secondary head office of TIM is located at Corso d'Italia 41, Rome. 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 Depository 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, increased its ownership stake in TIM to 14.9% of Ordinary Shares, becoming our largest shareholder. In the following months, Vivendi subsequently increased its shareholding in the Company and, as of April 9, 2018, Vivendi holds 23.94% of the ordinary share capital of TIM. Vivendi does not hold Savings Shares (or Savings Share ADSs) does not have different voting rights in meetings of ordinary shareholders of TIM.

At the Shareholders Meeting held on May 4, 2017, a new Board of Directors of 15 members was appointed for a 3-year term that terminates following the approval of the financial statements for the year ended December 31, 2019. Vivendi's slate obtained the highest number of votes and, as a consequence, 10 of 15 Directors were appointed from this slate.

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

**4.1.2 DEVELOPMENT**

On March 6, 2018, TIM presented its 2018-2020 Strategic Plan. The 2018-2020 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 2017, there were no significant changes in the scope of consolidation of the TIM Group.

The principal changes in the scope of consolidation for 2016 were as follows:

- **TIMVISION S.r.l.** Business Unit Domestic: established on December 28, 2016;
- **Noverca S.r.l.** Business Unit Domestic: 100% of the company acquired by TIM S.p.A. on October 28, 2016;

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- **Flash Fiber S.r.l. Domestic Business Unit:** established on July 28, 2016;
- **Sofora Telecom Argentina group:** classified under Discontinued operations (discontinued operations/non-current assets held for sale). The company was sold on March 8, 2016; and
- **Revi Immobili S.r.l., Gestione Due S.r.l. and Gestione Immobili S.r.l. Domestic Business Unit:** on January 11, 2016, INWIT S.p.A. acquired 100% of both companies, subsequently merged by incorporation in INWIT, which therefore entered the Group's consolidation scope.

These changes did not have a significant impact on the Consolidated Financial Statements of the TIM Group at and for the year ended December 31, 2016.

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 5.2.2. 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).

The Telecom Italia Sparkle group develops fiber optic networks for wholesale in Europe, the Mediterranean and South America.

**Olivetti**, part of the Business segment of Core Domestic, operates in the area of office products and services for information technology ( **IT** ).

**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.

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.

At December 31, 2017, the TIM Group had approximately 11,044 thousand physical accesses (retail) in Italy, a decrease of 241 thousand compared to December 31, 2016. The Wholesale customer portfolio in Italy was approximately 7,951 thousand accesses for telephone services at December 31, 2017, an increase of 273 thousand accesses as compared to December 31, 2016. The broadband portfolio in Italy was 10,154 thousand accesses at December 31, 2017 (consisting of approximately 7,641 thousand retail accesses and 2,513 thousand wholesale accesses), an increase of 948 thousand compared to December 31, 2016 (9,206 thousand accesses). In addition, the



TIM Group had approximately 30,755 thousand mobile telephone lines in Italy at December 31, 2017, an increase of 1,138 thousand compared to December 31, 2016.

***Brazil Business Area***

The TIM Group operates in the mobile phone, fixed telephony, in long-distance and data transmission markets in Brazil through the TIM Brasil group which offers mobile services using UMTS, GSM and LTE technologies. With the acquisitions of 700MHz and 2.5GHz radiofrequencies, the focus is on accelerating the development of 4G and 3G networks. Moreover, with the acquisitions of Intelig Telecomunicações (now TIM S.A.), Tim Fiber RJ and Tim Fiber SP (now merged into Tim Celular S.A.), the portfolio of services has been expanded by offering optic fiber data transmission using full IP technology, such as DWDM and MPLS and offering residential broadband services.

At December 31, 2017, the TIM Group had 58.6 million mobile telephone lines in Brazil, as compared to 63.4 million at December 31, 2016.

**Table of Contents****Item 4. Information On The TIM Group****Business****4.1.4 DISPOSALS AND ACQUISITIONS OF SIGNIFICANT EQUITY INVESTMENTS IN 2017**

For a description of disposals and acquisitions of significant equity investments in 2017 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 2018****Shareholders meetings called for the renewal of Directors**

On March 22, 2018, TIM's Board of Directors met to consider, among other matters, the request of shareholders Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership to supplement the agenda for the Shareholders Meeting that has been called for April 24, 2018.

During the meeting, the Board acknowledged the resignation of the Executive Deputy Chairman (and Chairman of the Strategy Committee) Giuseppe Recchi, effective immediately. With respect to the powers over the Security department and those activities and assets of the Company that are of importance from a defense and national security perspective, previously assigned to the Deputy Chairman Recchi, the Board of Directors appointed Franco Bernabè as the Director with those responsibilities. Mr. Bernabè (already a member of the Strategy Committee) was also appointed as Deputy Chairman, with the prerogatives set forth in the law and the Company Bylaws.

During the Board meeting, each of the following members resigned, effective April 24, 2018, prior to the Ordinary Shareholders Meeting of the Company to be held on that date:

- Arnaud de Puyfontaine Executive Chairman (member of the Strategy Committee by right),
- Camilla Antonini Director (member of the Control and Risk Committee, independent),
- Frédéric Crépin Director (member of the Strategy Committee and the Nomination and Remuneration Committee),
- Félicité Herzog Director (member of the Control and Risk Committee, independent),
- Marella Moretti Director (member of the Control and Risk Committee, independent), and
- Hervé Philippe Director (member of the Nomination and Remuneration Committee).

The Company has subsequently received a notice of resignation from Director Anna Jones (Chair of the Nomination and Remuneration Committee, independent).

In resigning, the aforementioned Directors expressed the hope that their resignations would help clarify and provide certainty to the governance of the Company, passing the responsibility of appointing the new board to the Shareholders Meeting in accordance with applicable law and the Bylaws.

Article 9.10 of the TIM Bylaws provides that if at any time a majority of the members of the Board of Directors should cease to hold office, for any cause or reason, the remaining Directors shall also be understood to have resigned, and will cease to hold office from the moment the Board of Directors is reconstituted by appointment by the shareholders meeting. Acknowledging that from April 24, 2018 these conditions are expected to be met, the Board of Directors decided by a majority to call for a meeting of the Ordinary Shareholders to be held on May 4, 2018.

The Board of Directors did not supplement the agenda for the Shareholders Meeting of April 24, 2018 (regarding the removal and replacement of Directors Arnaud Roy de Puyfontaine, Hervé Philippe, Frédéric Crépin, Giuseppe Recchi, Félicité Herzog and Anna Jones), given that, on April 24, 2018, the Directors in question would have all resigned and ceased to hold office.

On March 27, 2018, the Board of Statutory Auditors examined the request received from the shareholders Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership to supplement the agenda of the Shareholders Meeting to be held on April 24, 2018 and decided to supplement the agenda in accordance with the

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**Business**

terms requested.

On April 4 2018, a supplemented agenda for the shareholders meeting called for April 24, 2018 was published with the following two additional items:

- revocation of the directors (in the measure necessary, according to the timing of the resignations offered and accepted during the board meeting of March 22, 2018, pursuant to article 2385, subsection one, of the Italian Civil Code); and
- appointment of six Directors, in the persons of Fulvio Conti, Massimo Ferrari, Paola Giannotti De Ponti, Luigi Gubitosi, Dante Roscini and Rocco Sabelli, to replace Arnaud Roy de Puyfontaine, Hervé Philippe, Frédéric Crépin, Giuseppe Recchi, Félicité Herzog and Anna Jones, who have ceased to hold office.

On March 29, 2018, TIM announced that its Board of Directors would meet on April 9, 2018 to discuss potential actions to be taken following the decision by the Board of Statutory Auditors to supplement the agenda for the Shareholders Meeting of April 24, 2018, following the request from shareholders Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership.

On April 5, 2018, TIM announced that, in view of the ordinary Shareholders Meeting called for May 4, 2018 (single call), Vivendi S.A., with a declared total shareholding of approximately 23.94% of the capital with voting rights, proposed the following slate of candidates for appointment of the Company's Board of Directors:

1. Amos GENISH
2. Arnaud Roy de PUYFONTAINE
3. Franco BERNABÈ
4. Marella MORETTI\*
5. Frédéric CREPIN
6. Michele VALENSISE\*
7. Giuseppina CAPALDO\*

8. Anna JONES\*

9. Camilla ANTONINI\*

10. Stephane ROUSSEL

The candidates indicated with an asterisk declare themselves independent.

In presenting the slate, Vivendi also put forth the additional proposals to be resolved on relating to the renewal of the Board of Directors as follows:

- set the number of members of the Company's Board of Directors at fifteen;
- set the term of office at three years, with expiry of the term on the date of the Shareholders' Meeting to be held for the approval of the financial statements for the year 2020; and
- set the total annual compensation of the Board of Directors in accordance with art. 2389, paragraph 1, of the Italian Civil Code, assuming a composition of fifteen members, to be allocated among the Directors in accordance with the resolutions to be passed by the Board at Euro 2,200,000.

**TIM: AGCom notified of commencement of project to voluntarily separate the fixed access network**

On March 27, 2018, TIM notified AGCom, pursuant to Article 50 of the Electronic Communications Code, of the voluntarily separation of its access network through the creation of a separate legal entity ( **NetCo** ). The new company, which is 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. The project, approved by the Board of Directors on March 6, 2018, will follow the procedures set forth in the Electronic Communications Code and the timing defined by the Authority.

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The creation of the NetCo will leave the Group scope unchanged and will occur in compliance with the provisions of the Golden Power regulations.

**The Board of Directors by a majority vote considered unlawful the decision to supplement the agenda of the shareholders meeting of April 24, 2018 taken by the Board of Statutory Auditors.**

**Call notice for the Shareholders meeting on May 4, 2018 remains valid and effective.**

The Board of Directors of TIM met on April 9, 2018 to assess the Board of Statutory Auditors' decision to supplement the agenda of the Shareholders Meeting due to be held on April 24, 2018 thereby granting the request made by the shareholders Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership on March 23, 2018.

The Board, also supported by its legal advisors and having received three *pro veritate* opinions provided by some of the most authoritative legal experts (Piergaetano Marchetti, Giuseppe Portale, Roberto Sacchi), concluded that:

- the Board of Statutory Auditors' decision was not compliant with the correct application of the rules governing the powers of the control body. The Board of Statutory Auditors, in fact, can only intervene in a situation of inertia (inactivity) of the administrative body in granting the supplementation request made by the shareholders and not in a situation where there is a justified decision, which the Board of Statutory Auditors does not agree with, as was the case in this situation;
- the Board of Statutory Auditors made its decision on the basis of a note it received in an unorthodox manner from the legal consultants of the Elliott funds on March 24, 2018, which was after the time period prescribed by law. Moreover, the note was not shared with the Board of Directors until after the decision had already been made. The Board of Directors was not asked to comment, which might have prevented a decision to supplement the Agenda of the Shareholders Meeting, which is contradictory, unlawful and detrimental to the interests of TIM's shareholders;
- the supplement to the Agenda, to which the Board of Statutory Auditors has given its resolution, goes against article 9.10 of TIM's Bylaws, which provides that if a majority of the seats on the Board of Directors should become vacant for any cause or reason, the remaining Directors shall be deemed to have resigned and they shall cease to hold office from the time the Board of Directors has been reconstituted by persons appointed by the Shareholders Meeting. It also goes against article 2386, subsection four, of the Italian Civil Code, which states that if specific provisions of the Bylaws require that after some directors cease to hold office the entire Board should be divested of office, the Shareholders meeting to appoint the new Board shall be called as a matter of urgency by the directors who have remained in office;
- the Board of Directors confirms that the call for the TIM shareholders meeting on May 4, 2018 is legitimate, in order to proceed with the entire renewal of the Board, in compliance with the binding market rules regulating the

vote of the slates, on which the Board of Statutory Auditors did not express an opinion.

The Board of Directors, has therefore decided by majority vote and with the contrary vote from Directors Borsani, Calvosa, Cornelli, Frigerio and Vivarelli:

1. to formally dissociate from the Board of Statutory Auditors' decision, which it considers erroneous and particularly serious;
2. to confirm that the request to supplement the Agenda of the Shareholders' Meeting of April 24, 2018 submitted by the Elliott funds has been superseded, in view of the resignations of eight Directors (all of which shall come into effect before the start of the Shareholders' meeting); and to confirm the validity of the call notice for the TIM Shareholders' meeting on May 4, 2018 in order to proceed with the full renewal of the Board of Directors;
3. to take every legal action to protect the rights and interests of all shareholders and of the Company;
4. to set out in full the reasons for its decisions by publishing the relevant documents (opinions and accompanying preparatory note on the discussion, along with the documentation that will be made available by the Board of Statutory Auditors) on its website, to allow all TIM shareholders to have full knowledge of the Board of Directors positions so that they can make informed decisions; and

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5. to send all the documents mentioned to Consob for consideration of those matters which are within its remit. In rejecting the arguments brought by the Board of Directors to support its deliberation, on April 9, 2018 the Board of Statutory Auditors reiterated the legitimacy of its own determinations.

Furthermore, in execution of the decision taken by the Board of Directors on April 9, 2018, TIM appealed before the Milan Court of Justice the decision of the Board of Statutory Auditors to supplement the agenda of the Shareholders Meeting of April 24, 2018 in accordance with the request of the Elliott funds.

TIM has requested from the Milan Court of Justice the application of urgency provisions by April 24, 2018, when Shareholders Meeting is scheduled.

**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, 2017:

(\*) 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 S.r.l. and Noverca S.r.l.

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 the 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, 2017 5.2.5 Business unit financial data .

**4.1.7 UPDATED STRATEGY*****Strategic Priorities and Objectives for the 2018 2020 Strategic Plan***

On March 6, 2018, TIM s Board of Directors approved the 2018 2020 Strategic Plan (the **Plan** ). The Plan provides for the digitalization of all processes to dramatically enhance the digital experience for best-in-class customer engagement and to create an effective digital journey. Customer experience is expected to be improved by offering one single and intuitive interface that will allow for more customized, multi-channel interaction, thanks



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to a renewed IT architecture. The above implies a fully digital model of relationship with the client, based on the use of Big Data and advanced analytics to sustain the customer base and capture new growth opportunities, contributing to the consolidation of TIM's leadership in the Fixed and Mobile segments.

The objective over the Plan's time span is to significantly increase digital engagement with customers.

The customer offer, based on TIM's network leadership (fiber, 4.5G and 5G early adoption in 2020), focuses on greater convergence.

The Plan, focusing on digital innovation as a key element for a leadership positioning in the Gigabit Society, is aimed at:

- creating best-in-class customer engagement through a digital and agile customer journey redesign;
- supporting leadership positioning by sustaining premium customer base and capturing new growth opportunities in and outside the core business;
- accelerating cash flow generation to strengthen capital structure and increase shareholder return; and
- implementing a new agile organization and performance-based and data driven culture.

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

Consumer:

- sustain premium customer base through convergence (data and exclusive content);
- extract more value from customer base through the acceleration of fiber migration and new avenues of growth; and
- transform customer engagement through Digital journeys and new simplified portfolios.

Business:

- sustain traditional revenue base through convergence, fiber and VOIP migration;

- accelerate evolution towards an ICT Company to capture new growth opportunities (e.g., cloud, ICT on SMEs).

Wholesale:

- sustain traditional revenues through fiber migration;
- step-change growth of non-regulated sales by radically improving customer engagement;
- optimize coverage to improve competitive positioning.

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:** for the Brazilian market, the 2018 – 2020 Industrial Plan aims to confirm Tim Brasil’s leadership in Ultra-Broadband Networks and digitalize Tim Brasil customers’ experience to become the best telecommunication provider in Brazil and consistently continue to improve the financial results in terms of profitability and cash generation. In particular, a further boost is expected to be given to the 4G network with the deployment of the 700MHz coverage that, by the end of the 2018-2020 Plan, is expected to reach more than 4,200 cities. Additionally, in order to achieve the 2018-2020 Plan’s objectives regarding the digitalization of the customer’s experience, Tim Brasil is planning to almost double the KPI’s regarding digital interactions, electronic billing and electronic payment, in order to deliver a customized and flexible experience, while opening opportunities for savings with respect to operating expenses.

**Inwit:** strengthen leadership in the Italian tower market, leveraging new mobile opportunities and leading network densification phase.

**Telecom Italia Sparkle:** sustain traditional business, expand commercial footprint on new geographies and accelerate data/VAS services.

The DigiTIM strategy combines careful financial discipline based on cost control and optimization of investments, to increase cash generation and create value. The use of data analytics is expected to allow TIM to improve investment efficiency by prioritizing value-driven capital expenditure and by leveraging the current UBB infrastructure; and increase efficiencies with respect to operating expenses.

The DigiTIM strategy is expected to drive end-to-end transformation across all business units, both structurally and culturally. To support the transformation process, company organization at TIM will be delayered and will move from a silo-based approach to an agile one based on flexibility and speed with a focus on results.

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To ensure the fulfillment of the Plan, the newly created Transformation Office will oversee the execution of the program.

Moreover, on March 6, 2018, TIM's Board of Directors granted TIM CEO Amos Genish the power to start a formal procedure to notify AGCom of the Company's request for a voluntary separation of its fixed access network.

As a result, on March 27, 2018, TIM notified AGCom, pursuant to Article 50 of the Electronic Communications Code, of the voluntarily separation of its access network through the creation of a separate legal entity ( **NetCo** ). For further details, please see 4.1.5 Recent developments during 2018 .

The Netco is expected to have the investment capabilities to maintain the highest quality network and help Italy meet the European 2025 Digital Agenda ultrabroadband goals. The initiative is expected to contribute significantly to further develop the digitalization of the country, supporting the evolution of the current regulatory framework.

The creation of the Netco will leave the Group scope unchanged, and will occur in compliance with the Golden Power provisions.

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 .

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**4.1.8 THE ORGANIZATIONAL STRUCTURE**

The following diagram highlights the organizational structure of the TIM Group as of April 12, 2018:

- (1) Corporate Affairs activities refer functionally to the Executive Chairman.
- (2) The Chief Executive Officer coordinates directly Corporate Communication and Brand Management activities.
- (3) Related to activities and assets relevant for national security and defense.
- (4) Related to business activities not relevant for national security and defense.

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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, 2017, 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., TIM Vision S.r.l. and Noverca S.r.l.

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 Alfabook;
  - **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, TIM San Marino and Telefonía 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;

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- **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.

v **MARKETING CHANNELS AND DISTRIBUTION**

At December 31, 2017, 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 31 partners having a total of approximately 4,000 operators and the **Agent** channel with approximately 100 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 5,300 retail points of sale (at December 31, 2017). 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.



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- 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 2017 more than 1,000 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;
- billing, credit and administrative activities, revenue integrity control; and
- caring and business process re-engineering.

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.

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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,		
	2017	2016	2015
<b>DOMESTIC FIXED</b>			
Physical accesses (thousand)(1)	18,995	18,963	19,209
<i>Of which retail physical accesses (thousand)</i>	<i>11,044</i>	<i>11,285</i>	<i>11,742</i>
Broadband accesses in Italy at year-end (thousand)(2)	10,154	9,206	8,890
<i>Of which retail broadband accesses (thousand)</i>	<i>7,641</i>	<i>7,191</i>	<i>7,023</i>
<b>Network infrastructure in Italy:</b>			
access network in copper (millions of km pair, distribution and connection)	114.6	114.4	114.3
access and carrier network in optical fiber (millions of km fiber)	14.3	12.6	10.4
<b>Total traffic:</b>			
Minutes of traffic on fixed-line network (billions):	64.0	69.1	76.9
<i>Domestic traffic</i>	<i>50.7</i>	<i>55.6</i>	<i>62.5</i>
<i>International traffic</i>	<i>13.3</i>	<i>13.5</i>	<i>14.4</i>
Broadband traffic (PBytes)(3)	7,848	5,774	4,126
<b>DOMESTIC MOBILE</b>			
Number of lines at year-end (thousand)(4)	30,755	29,617	30,007
Change in lines (%)	3.8	(1.3)	(1.1)
Churn rate %(5)	26.2	22.8	23.4
<b>Total traffic:</b>			
Outgoing retail traffic (billions of minutes)	51.4	44.9	43.6
Incoming and outgoing retail traffic (billions of minutes)	78.1	69.6	66.1
Mobile browsing volumes (PBytes)(6)	417.5	258.5	182.6
Average monthly revenues per line(7) (euro)	12.5	12.4	12.1

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

(2) Excludes OLO LLU and NAKED, satellite, full-infrastructure 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.

v **MAIN CHANGES IN THE REGULATORY FRAMEWORK**

For a description of the main regulatory events that occurred in 2017 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 .

v **COMPETITION**

*The market*

During 2017, the Italian telecommunications market has returned to moderate growth, after years of steady decline, however, the competitive pressures continue to be very significant.

In addition to the core competition by other telecommunications players, which remains the primary competitive force in the market, telecommunications operators also face competition from emerging, non-traditional players, in particular OTTs and device producers, that operate in the digital world and use a different set of assets and competitive strategies.

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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.

As such, over time, the business models of traditional players are changing to meet the challenges brought on by new entrants and to exploit new opportunities. For example:

- **Media & Entertainment:** with the web becoming increasingly more important as a complementary distribution platform, OTTs, telecommunications operators and consumer electronics companies are playing an increasingly significant role;
- **Information Technology:** the decline of revenues from traditional streams is driving various players towards Cloud computing, with the goal of protecting the core business. Traditional telecommunications operators are strengthening in this sector, including through reliance on partnerships;
- **Consumer Electronics:** producers can develop services that can be used through the Internet, building on handset ownership and management of user experience, breaking the relationship between customers and telecommunication operators.

With respect to the current positioning of the telecommunications operators in converging markets, the following is taking place with varying levels of progress:

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

***Competition in Fixed-Line Telecommunications***

The fixed-line telecommunications market continues to experience a decline in access and voice revenues, on the one hand, and a growth of broadband and ultrabroadband revenues on the other. In recent years, operators have concentrated mainly on enhancing penetration of broadband and ultrabroadband and attempting to protect voice services by introducing bundled voice, broadband and services deals in a highly competitive environment that is characterized by pricing pressures.

The evolution of competitive offering strategies has also been influenced by a convergence on an approach based on the control of infrastructure, above all Local Loop Unbundling ( **LLU** ), but also fiber networks development. The main fixed operators are also offering mobile services, either with an **infrastructured** model or adopting a Mobile Virtual Operator ( **MVO** ) model.

With respect to infrastructure, Open Fiber (a company under the control of Enel S.p.A.) and Infratel (a company owned by the Ministero dello Sviluppo Economico) have disclosed and started to implement development plans for their optic fiber telecommunications networks alternatives to the TIM's one, concerning respectively the main Italian cities and so-called "market failure" areas.

Open Fiber has disclosed a 3.9 billion euro investment plan for the development of FTTH in 271 main Italian cities within 2022, reaching approximately 9.6 million households. The service is currently available in some areas of such main cities, such as Milano, Torino and Bologna, previously reached by Metroweb, as well as Bari, Cagliari, Catania, Napoli, Padova, Perugia, Venezia, Genova and Palermo. Open Fiber announced that a further 40 cities would be reached before the end of 2017 and with an additional 40 over the course of 2018.

Some of our competitors in the retail communications market have signed a deal to use the Open Fiber network, wherever available, with respect to new ultrabroadband customers.

With respect to "market failure" areas, so-called "white areas" of C and D clusters of the plan "Banda Ultra Larga" by the Italian Government, Infratel launched two tenders in 2016 and 2017 relating to the development of a network for ultrabroadband services for 9.3 million real estate units in more than 6,000 cities in 16 regions. In the first tender, Open Fiber won all five lots in the six regions involved (Lombardia, Emilia Romagna, Veneto, Toscana, Abruzzo and Molise), encompassing approximately 3,000 cities and 4.6 million real estate units. In the second tender, Open Fiber won all six lots in the 10 regions involved (Piemonte, Valle D'Aosta, Liguria, Friuli Venezia

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Giulia, Provincia Autonoma di Trento, Marche, Umbria, Lazio, Campania, Basilicata e Sicilia), encompassing approximately 3,700 cities and 4.7 million real estate units. Moreover, Infratel is preparing a third tender for the remaining areas in Calabria, Puglia and Sardegna. The public consultation for this third tender ended on November 20, 2017.

Therefore, the development of the Open Fiber plan and of the coverage deriving from Infratel tenders has brought about an important evolution with respect to competition on infrastructure, subject to the overlapping reach of available ultrabroadband infrastructures.

1. Areas with presence of two FTTH networks overlapping with FTTC networks.
2. Areas with presence of only one FTTH network overlapping with FTTC networks.
3. Areas with presence of FTTH networks overlapping with ADSL networks.
4. Areas with presence of FTTC networks overlapping with ADSL networks.

Competition in the Italian fixed telecommunications market is characterized by the presence of a number of operators in addition to TIM, such as Wind-Infostrada, Fastweb, Vodafone and Tiscali, that have different business models, focused on different segments of the market. In 2017, after years of contraction due to the migration of customers from fixed-line to mobile telephony services and to alternative communications solutions (Voice Over IP, messaging applications and social network chat) in Italy, there has been a slight increase of fixed accesses, which at December 31, 2017 were estimated at approximately 20.6 million (including infrastructured OLOs and Fixed Wireless Accesses). Competition in the access market has led to a gradual reduction in TIM's market share.

As of December 31, 2017, it is estimated that the fixed broadband/ultrabroadband customers in Italy reached a penetration rate on fixed accesses of approximately 81%. The spread of broadband/ultrabroadband continues to be driven not only by the penetration of personal computers and other enabled devices (e.g. Smart TVs), but also by the growing demand for speed and access to new IP based services that are reaching a very wide diffusion (Media & Entertainment, IT, Digital Services).

***Competition in Mobile Telecommunications***

In the mobile market, the second and third Human SIMs (i.e. multiple SIMs per user) continued to decrease while the Not Human SIMs continued to grow due to the increase of Machine To Machine (M2M) SIMs (i.e. data transmission SIMs for connected objects). In 2017, the mobile market experienced a slight growth of the spending on services, however, there were signs of weakness in the second half of the year. The contraction of revenue from traditional services, such as voice and messaging has continued, while mobile broadband has grown at a sustained rate.

The growth in the mobile broadband customer base has continued due to the development of LTE, with a high penetration rate on mobile lines, especially as a result of the increasing spread of smartphones. Alongside innovative

services that have already gained traction 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 Payments.

In 2017, competition in the Italian mobile telecommunications market has been characterized by the effectiveness of the merger between Wind and H3G that has resulted in the largest player in the market in terms of SIMs. Moreover, TIM has launched Kena Mobile, a new virtual operator. In 2018, it is expected the French operator Iliad will enter the Italian market, becoming the fourth infrastructured operator in addition to TIM, Vodafone and Wind Tre. In addition to these operators, the field also includes mobile virtual operators (MVO), of which PosteMobile is the most important player. These operators continue to grow, to detriment of infrastructured operators.

#### **4.2.2 BRAZIL**

The TIM Group operates in the mobile phone, fixed telephony, long-distance and data transmission and fixed telecommunications sectors in Brazil through the Tim Brasil group which offers mobile services using UMTS, GSM



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and LTE technologies. With the acquisitions of 700MHz and 2.5GHz radiofrequencies, the focus is on speeding up the development of 3G and 4G networks. Moreover, with the acquisitions of Tim S.A. (formerly Intelig Telecomunicações), Tim Fiber RJ and Tim Fiber SP (now merged into Tim Celular S.A.), the portfolio of services has been expanded by offering fiber optic data transmission using full IP technology such as DWDM and MPLS and offering residential broadband services.

The Tim Brasil group's services cover an area that includes approximately 95% of Brazil's urban population. Tim Brasil group has approximately 58.6 million mobile lines which cover each of the Brazilian states and the Federal District. As of December 31, 2017, the market combined penetration reached approximately 113% of the Brazilian population and Tim Brasil's market share totaled almost 25%.

Since Tim Brasil group began operating in the Brazilian market, it has aimed to provide customers with innovative services based on state-of-the-art technology, making it a leader in 4G network in coverage and providing a robust 3G network.

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

	As of and for the years ended December 31,		
	2017	2016	2015
Number of lines at year-end (thousands) (*)	58,634	63,418	66,234
MOU (minutes/months) (**)	109.7	116.6	119.5
ARPU (Reais)	20.2	18.0	16.7

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

(\*\*) Net of visitors.

#### v **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) effectively eliminating different rates for calls within and outside the Tim Brasil network. This effort is intended to increase the convenience of the company's voice and data bundles in all segments. Tim Brasil took this step in order to reduce the usage of multiple SIM cards per user. This change aims to help Tim Brasil grow its base of postpaid customers by providing more complete voice and data offers at reasonable prices, which could stimulate usage growth, driven by a robust 4G network, and also to protect and increase the value of the prepaid customer base, where the company continues to be a

leader.

Although still preliminary, the first results of Tim Brasil's new offers are very encouraging in terms of attracting new clients, generating new gross additions, increasing ARPU and meeting projected margin targets. These new

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**Business Units**

offers are helping to improve the results of Mobile Number Portability relative to all other operators, across customer segments, beginning from the launch month of the new portfolio.

**v DISTRIBUTION**

As of December 31, 2017, we had more than 12.2 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 156 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 310 thousand points of sale throughout Brazil.

For the corporate market, Tim Brasil has more than 536 third-party business partners and 112 employees focused on serving small and medium-size companies and a direct sales force team of 86 employees focused on large companies.

In order to serve the customer base of over 58.6 million customers, Tim Brasil maintains 14 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.

**v MAIN CHANGES IN THE REGULATORY FRAMEWORK**

For the main regulatory developments which occurred in 2017 that may have an economic impact on the Brazil Business Unit, please see Item 4. Information On The TIM Group 4.3 Regulation .

**v COMPETITION**

At the end of 2017, the Brazilian mobile market reached 236.5 million lines, 7.6 million lines (or 3.1%) lower than at the end of 2016, and a penetration rate of approximately 113% of the population (118.0% in 2016). Consequently the Brazil Business Unit churn rate in 2017 was 53.2% (52.4% in 2016).

\* \* \*

**Agreement for the sale of telecommunications towers**

On November 21, 2014, Tim Brasil entered into a sale and leaseback transaction with American Tower do Brasil Cessão de Infraestruturas Ltda., or American Tower, for the sale of part of the mobile infrastructure. By the end of the project, 5,873 towers were sold by the total amount of 2.65 billion reais. The sales agreement was signed in conjunction with a Master Lease Agreement with a term of 20 years and, accordingly, the transaction is to be considered as a partial sale and lease back.

In 2017, the sixth partial sale of 54 towers was completed for approximately 20 million reais, or approximately 6 million euros. The final realized loss, net of transaction costs, was 2 million reais (approximately 1 million euros at the 2017 average exchange rate). The amount of non-current assets reacquired under finance leases came to 19 million reais (approximately 5 million euros at the 2017 average exchange rate).

In 2017, financial leases were also taken out on newly-built towers for 30 million reais (approximately 8 million euros), in accordance with the contractual arrangements of November 21, 2014 with American Tower.

The sales of the first three blocks, which included a total of 5,483 towers, were completed in 2015.

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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** ).

The EU Regulatory Framework is based on five Directives ( Framework , Access and Interconnection , Authorization Universal Service and Users Rights Privacy and Data Protection ) 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**).

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 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).

On September 14, 2016, the EC issued a legislative proposal for a Directive establishing the European Electronic Communication Code (Recast) (the **EECC**), which reviews and combines in one document the Framework, Access and Interconnection, Authorization and Universal Service and Users Rights Directives. The EECC Directive will have to be approved according to the standard co-decision legislative procedure by the European Parliament and the Council of EU and then transposed into national law. Institutions have already started trilogue negotiations with the aim of reaching a political agreement on the text by June 2018. The transposition into the law of each Member State is unlikely to occur before 2019 and could be as late as 2020.

A new approach to access regulation is the central feature of the proposed EECC. The key elements of the approach proposed by the EC to access regulation are:

- regulatory relief in the presence of co-investment and Very High Capacity ( **VHC** ) networks;
- lighter regulation for wholesale-only vertically separated undertaking with significant market power;

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- no price control in the presence of a demonstrable retail price constraint and effective and non-discriminatory access; and
- a significantly more granular geographic approach to the analysis of broadband infrastructure deployment, with the potential for differing remedies.

In addition, the European Parliament has proposed to introduce an obligation to align intra-EU call prices to the domestic call prices and the Council of EU has proposed to reintroduce the possibility for NRAs to impose remedies at the retail level, which was removed in the EC proposal.

EU Institutions have reached an agreement on the regulation of wholesale-only undertakings while the other topics are still under discussion.

The EC has proposed to include in the scope of the communication EECC certain categories of over-the-top ( **OTT** ), thereby addressing the level playing field issue between Telcos and OTTs, albeit only partially, as the majority of the obligations are envisaged only for number-based interpersonal communication services (ICS) and services based on the conveyance of signal, typically provided by Telcos. Trilogue negotiations are leading to the extension of some end-user rules to number independent ICS .

With respect to spectrum, in order to stimulate investment, the EC has proposed a minimum duration of new spectrum licenses of 25 years. In addition, Member states would have to submit national measures regarding spectrum assignment procedures and license conditions (e.g., regarding license duration), renewal and coverage obligations, to the scrutiny of the EC, BEREC and other NRAs. EU Institutions have reached an agreement on the minimum licence duration providing for a minimum licence duration of at least 15 years with an adequate extension (on the basis of efficiency criteria set in advance of granting rights) to ensure regulatory predictability for at least 20 years.

With respect to the Universal Service Obligation (the **USO** ), the EC has proposed to include in the scope of the USO the provision of affordable functional internet access and voice communications services at least at a fixed location. Member States have the flexibility to also include the availability obligation at a fixed location in the USO, if access to functional internet and voice communications services is not ensured at the national level by market or public bodies. The provision of directories, directory enquiry services and public payphones (legacy services) is removed from the EU universal service obligation, although Member States have the flexibility to retain them. The net cost of universal service would be financed with public funds, rather than by Electronic Communication Service ( **ECS** ) providers. The European Parliament and the Council of EU would like to maintain flexibility for Member State to finance the net cost with public funds or through a sharing mechanism between operators.

**1. International Roaming**

Intra-EU roaming services are regulated by the roaming Regulation no. 531/2012 (the **Roaming III Regulation** ). The Roaming III Regulation established retail and wholesale caps for voice, SMS and data services. The following values have applied since July 1, 2014:

**at retail level:**

Voice out (eurocents/min.)	19
Voice in (eurocents/min.)	5
SMS (eurocents/sms)	6
DATA (eurocents/MB)	20

**at wholesale level:**

Voice (eurocents/min.)	5
SMS (eurocents/sms)	2
DATA (eurocents/MB)	5

The Telecom Single Market Regulation 2015/2120 (the **TSM Regulation** ), approved in November 2015, 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).



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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 wholesale caps. The Regulation 2017/920 reviews the wholesale caps established in the Roaming III Regulation. The new caps are reported in the table below.

Voice	<b>3,2 eurocents/min.</b>
SMS	<b>1 eurocent/min.</b>
	7,7 euro/GB from 15/06/17
	6,0 euro/GB from 01/01/18
	4,5 euro/GB from 01/01/19
Data	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. *New rules introduced by the TSM Regulation on 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<sup>2</sup> 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.

#### 4.3.2 THE ITALIAN REGULATORY FRAMEWORK

##### 1. *The Legal Framework*

The main legal frameworks for the electronic communications sector in Italy are as follows:

- the Electronic Communications Code ( **ECC** ), which transposed into national law the EU Access, Authorization, Framework and Universal Service directives;
  - the Data Protection Code ;
  - the Consolidated Law on Radio-Television containing the principles regulating the organization of radio-television system and its convergence with different means of interpersonal and mass communications;
  - Law 36 of February 22, 2001 aimed at protecting the population from the effects of the exposure to electric, magnetic and electromagnetic fields and the decree of the President of the Council of Ministers (Decreto del Presidente del Consiglio dei Ministri; the **DPCM** ) of July 8, 2003, which sets up Exposure limits, attention values and quality goals to protect the population against electric, magnetic and electromagnetic fields generated by frequencies between 100 KHz and 300 GHz ;
- <sup>2</sup> 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.

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- the Consumer Code ;
  - implementation Decrees for Golden Power rules (Law no. 56/2012) redefining the State powers for the safeguard of national interest in the strategic sectors of energy, transports and telecommunications;
  - Legislative Decree no. 21/2014 (implementation of Directive 2011/83/UE on consumers rights) defining the rules for distance contracts, with specific reference to the right of withdrawal and the acquisition of consumer's express consent to be bound to the contract. Furthermore the Decree attributes to the Antitrust Authority (Autorità Garante della Concorrenza e del Mercato; the **AGCM** ) the evaluation of sanctions for unfair commercial practices;
  - 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, enabling more efficient deployment of new infrastructures to reduce installation costs of UBB networks;
  - Decree 148/2017, which requires electronic communications operators to provide billing cycles of one month (or month multiples) for fixed and mobile services;
  - Law n. 167/17, which introduces new sanctions applicable to communication operators and modifies the rules on traffic data retention;
  - Law n. 205/2017 ( *Legge di Bilancio 2018* ), which sets the tender for 5G frequencies in bands 700 MHz, 3.6 - 3.8 GHz, 26.5 -27.5 GHz to be held by September 2018;
  - Law n. 5/2018 which introduces new rules on the functioning of the public opt-out register.
- The Ministry of Economic Development ( **MISE** ) is responsible for general policy in the electronic communications sector and AGCom is responsible for ensuring fair competition and protecting customers in the telecom market.

**2. The Italian regulatory framework**

In July 2008, TIM proposed to AGCom various undertakings (the **Undertakings** ) with respect to the provision of wholesale services for the access to its network aimed at integrating and strengthening the non-discrimination obligations (imposed by AGCom since 2002) amongst TIM's own retail divisions and the Alternative Network Operators ( **AltNets** ).

To this end, at the beginning of 2008, TIM created the new Open Access department, a separate operating unit focusing its activities on the implementation of the Undertakings.

The implementation of the Undertakings, their complexity and their impact on the stakeholders' IT systems and procedures, also required the establishment of a new governance model. Specifically, the following bodies were established: an independent supervisory body (the **Supervisory Board**); the AGCom Undertakings' Monitoring Group, in charge of the undertaking implementation monitoring (Gruppo per il Monitoraggio degli Impegni **GMI**), the Italian Office of Telecommunications Adjudicator (**OTA Italia**), in charge to prevent and settle any possible disputes amongst AltNets; and the **Next Generation Network Committee**, in charge of submitting possible solutions for any technical, organizational and economic issues which would raise due to the transition to the Next Generation Network.

On November 5, 2015, TIM's Board approved a plan to introduce a New Equivalence Model (**NEM**), aimed at further strengthening the efficiency and effectiveness of the delivery (provision) and assurance (maintenance) processes of TIM's wholesale access services.

The New Equivalence Model aims to put TIM's sales divisions on equal footing with AltNets, in order to achieve a more effective internal and external equality of treatment and greater transparency in the management of the line activation requests.

Specifically, 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 AltNets (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.

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The most important change resulting from the New Equivalence Model is that TIM Retail purchases wholesale access services through the same interface used by the AltNets. TIM Retail and AltNets will use the same processes, IT systems, and information databases. A full equality of treatment of the delivery activities is therefore ensured. In particular, the same regulated wholesale access services are provided to all Operators (TIM Retail and AltNets), at the same level of quality, prices, and with the same times.

As an initial step in the process of implementing the NEM, Open Access and TIM's National Wholesale department have been merged into a single department.

The plan of New Equivalence Model was communicated to AGCom within the proceeding of fixed wholesale access services market analysis (Decision 623/15/CONS see below) and, after a public consultation between June and July 2016, it was approved by the Italian NRA (Decision 652/16/CONS of December 2016).

The implementation of the NEM was completed in May 2017. TIM retail has begun using the new delivery systems. The migration process of the alternative operators to the new delivery systems remains ongoing.

**4.3.3 MARKET ANALYSES**

The EU regulatory framework (Art. 16 of the Framework Directive) obliges 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.

According to art. 14.2 of the Directive *an undertaking is deemed to have SMP when, either individually or jointly with others, it enjoys a position equivalent to dominance, which is a position of economic strength providing the company itself with the power to behave, to an appreciable extent, independently of competitors, customers and ultimately consumers* . Market shares are normally used as a proxy for market power: while undertakings with market shares of no more than 25% are not likely to enjoy a (single) dominant position, single dominance concerns normally arise in the case of undertakings with market shares of over 40%. Market shares in excess of 50% are in themselves, except in exceptional circumstances, evidence of the existence of a dominant position.

The basis of the market analyses is the Recommendation on relevant markets susceptible of ex ante regulation which identifies the relevant markets . The first version of the Recommendation was adopted in 2003 and contained a list of 18 relevant markets. In 2007 the EC adopted the second version and reduced the number of markets to 7 (both retail and wholesale markets): retail access at a fixed location (market 1) and, at wholesale level, call origination at a fixed location (market 2); call termination at a fixed location (market 3); wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location (market 4); wholesale broadband access (market 5); wholesale terminating segments of leased lines (market 6) and voice call termination on mobile networks (market 7).

In October 2014, the EC adopted the third version which is currently in force and identifies only five wholesale markets susceptible to ex-ante regulation: call termination at fixed location (market 1), call termination on mobile networks (market 2), local access at fixed location (market 3a), central access at fixed location for mass-market products (market 3b), high-quality access at fixed location (market 4).

The market analyses carried out by the NRAs are subject to the assessment of the EC which, to a certain extent, can challenge the NRAs' findings, having a veto power on the definition of the market and on the identification of SMP

operators. Vice-versa, the EC has no veto power on the imposition of the remedies, but can raise serious doubts following which the BEREC is requested to give an opinion. The EC, the BEREC and the NRA must then cooperate to find a solution within three months. Neither the EC nor BEREC are able to make a binding intervention. The NRA can decide not to amend or withdraw its Decision on remedies but it must provide a reasoned justification .

Following a first round (2006-2007) and a second round (2007-2010) of market analyses, a third round was started by AGCom in 2012. The third round of market analysis ended in October 2016 with the AGCom Decision on fixed voice interconnection market.

With respect to retail markets, despite the fact that they are not included in the current list of the EU relevant markets (Recommendation of 2014), the final AGCom Decision of the market analysis on wholesale access

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markets, retained some obligations, such as the notification of retail charges prior to the commercial launch and the obligation to carry a replicability test of the retail offers (taking into account the most efficient network architecture that could be used by AltNets to compete in a specific context).

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

**4.3.4 WHOLESALE MARKETS****v 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, despite the increasing development of the infrastructure competition in some of the geographic areas;
- 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 following table shows the 2017 wholesale economic prices:

<b>Service</b>	<b>2017</b>
LLU (euro/month/line)	8.61
SLU (euro/month/line)	5.3
SA (euro/month/line)	0.73
WLR POTS (euro/month/line)	11.06
WLR ISDN (euro/month/line)	13.67
Bitstream shared (euro/month/line)	4.29
Bitstream naked (euro/month/line)	12.46
VULA FTTC shared (30 Mbps) (euro/month/line)	7.88
VULA FTTC shared (50 Mbps) (euro/month/line)	9.63
VULA FTTC naked (30 Mbps) (euro/month/line)	13.27
VULA FTTC naked (50 Mbps) (euro/month/line)	15.02
VULA FTTH (100 Mbits/10 Mbits) (euro/month/line)	22.12
VULA FTTH (40 Mbits/40 Mbits) (euro/month/line)	30.65
VULA FTTH (100 Mbits/100 Mbits) (euro/month/line)	77.77



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<b>NGA<sup>3</sup> wholesale physical access Monthly fees (euro)</b>	<b>2017</b>
Miniduct access new infrastructures ( <i>IRU 15 years euro/miniduct/meter</i> )	9.11
Miniduct access existing infrastructures ( <i>IRU 15 years euro/miniduct/meter</i> )	6.21
Entries to buildings ( <i>IRU 15 years euro/miniduct</i> )	377.19
Dark fiber primary section ( <i>IRU 15 years/fiber</i> )	3,119.20
Dark fiber secondary section ( <i>IRU 15 years/fiber</i> )	1,690.13
End to End service (euro/month/line)	54.39
Fiber terminating segment (euro/month/line)	5.60

The access service fees are cost-oriented according to Bottom-Up Long Run Incremental Cost Plus/ Current Cost Accounting ( **BU-LRIC+/CCA** ) methodology and Weighted Average Cost of Capital ( **WACC** ) has been reduced from 9.36% to 8.77%. Moreover New Generation Access ( **NGA** ) Risk premium has been set equal to 3.2% for Fiber to the Home ( **FTTH** ) and 1.2% for Fiber to the Cabinet ( **FTTC** ).

Within the framework of the rules to access the fixed copper and fiber networks for the years 2015-17, AGCom also defined new measures to strengthen the equality of treatment guarantees in the provision of regulated wholesale access services at a fixed location. AGCom asked TIM to present a proposal to improve the efficiency of its own equivalence model in the provision of wholesale services to competitors and to its own commercial divisions. Consequently, in February 2016, the New Equivalence Model, in accordance with the TIM Board Decision taken on November 5, 2015, was communicated to AGCom. With Decision 652/16/CONS (December 2016), AGCom approved both TIM's New Equivalence Model and some voluntary undertakings adopted by TIM to favor the suspension of two sanctioning proceedings started by AGCom as a result of alleged inefficiencies in the wholesale access services provision processes which caused excessive delivery delays.

Additionally, with Decision 623/15/CONS, AGCom 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.

On February 20, 2017, AGCom began the fourth round of market analysis (Decision 43/17/CONS) to review the obligations and economic conditions of the access wholesale services. The proceeding is expected to be concluded by the end of 2018.

#### Ø 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;
- <sup>3</sup> New Generation Access.

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- 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).

**Ø 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.

**Ø Wholesale mobile markets**

In September 2015, AGCom issued a new Decision for termination on mobile networks. Compared to AGCom's previous market analysis, the full Mobile Virtual Network Operators ( full MVNOs ), i.e., BT Italia, Lycamobile, Noverca and Poste Mobile, have SMP in addition to the mobile network operators ( MNO ) and termination rates of

calls originated outside EEA are explicitly excluded from the scope of price regulation.

In addition, the WACC has been set at 10.25%, while the termination rate cap has been set at 0.98 eurocents/min. for the period 2014-2017 (for full MVNOs from September 30, 2015).

On February 14, 2017, AGCom began the fifth round of analysis of the mobile market (Decision 45/17/CONS) and on December 22, 2017, AGCom published the relevant public consultation (Decision 481/17/CONS).

AGCom proposes to:

- notify twelve operators who provide or are about to provide voice call termination services on their mobile network, as having SMP;
- confirm the use of the cost model pursuant to Decision 60/11/CONS for the definition of termination prices for the period 2018-2021, also establishing symmetrical tariffs for all notified operators;
- impose price control obligation for the supply of *interconnection kits*;
- remove the cost accounting obligation imposed on TIM, Vodafone and WindTre; and
- confirm the price control obligation is limited to calls originating in the European Economic Area.

#### **4.3.5 ACCOUNTING SEPARATION AND COST ACCOUNTING**

SMP operators are required to have a transparent accounting of their costs and to provide AGCom, on a yearly basis, with a description and a report on their cost accounting system, to enable AGCom to assess their compliance with the requirements of the electronic telecommunications regulatory framework.

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Moreover, SMP fixed and mobile operators must maintain an accounting system that separates the activities in each of the relevant wholesale and retail markets defined by AGCom according to the periodic market analyses.

The rules on regulatory accounting in Italy are set in accordance with EC Recommendations, particularly with Recommendation on Cost Accounting and Accounting Separation, issued in September 2005.

Changes in the regulation on cost accounting and accounting separation follow rules set out in the market analyses.

Through Decision 623/15/CONS on fixed access market analyses for the period 2015-2017, AGCom set the WACC for fixed networks at 8.77% (nominal pre-tax).

Through Decision 497/15/CONS on mobile termination for the period 2015-2017, AGCom set the WACC for the mobile network at 10.25% (nominal pre-tax).

The regulatory accounting report for the year 2014 was produced in 2015 and delivered to AGCom in January 2016.

The regulatory accounting report for the year 2015 was produced in 2016 and delivered to AGCom in September 2016.

The regulatory accounting report for the year 2016 was produced in 2017 and delivered to AGCom in August 2017.

**4.3.6 RETAIL MARKETS****v Retail Offers**

Despite the removal of retail fixed markets from the current list of the EU relevant markets (Commission's Recommendation on relevant markets of 2014), through its decision on the market analysis on wholesale fixed access markets (Decision 623/15/CONS), AGCom confirmed that TIM is subject to the following obligations regarding its publicly available stand-alone and bundled retail offers on fixed network: a 30-day notification prior to the commercial launch and an assessment by AGCom of the offer replicability (i.e. margin squeeze test and availability of adequate wholesale inputs); if the offer does not meet the replicability requirement, TIM must revise the offer conditions.

The replicability of TIM's retail offers for private tenders and public procurement bids (including either narrowband or UBB fixed access, both stand-alone and in bundling with other services) is verified only after the contract signature, on the basis of either AltNets complaints or AGCom autonomous initiative. Therefore, these retail offers have to be communicated to AGCOM within 30 days after the contract signature.

In December 2016, (Decision 584/16/CONS), AGCom updated the replicability tests (margin squeeze tests) methodology.

In the new guidelines, applicable from April 1, 2017, AGCom introduces the possibility to verify TIM's local retail offers, evaluating the wholesale costs as a mix of the TIM's wholesale services actually used in the specific area where the offer is provided.

With respect to retail offers, AGCom must apply two different replicability assessment models respectively for copper and fiber (ultrabroadband). For the fiber offers, AGCom also applies an ex-post test. If the fiber offer does not pass such ex-post test, AGcom may open a sanctioning proceeding for infringement of the non-discrimination obligation.

v *28-day billing cycle*

Since 2015, operators have changed billing cycles from 30 to 28 days for mobile voice services. Since 2016, the main operators extended this change to fixed voice services. TIM introduced 28-day billing for fixed services in April 2017, informing the customers about the 8.6% price increase due to the new billing schedule.

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On March 24, 2017, with Decision no. 121/17/CONS, AGCom introduced a prohibition for all operators on creating billing cycles of fewer than 30 days for the fixed line and converging services (fixed and mobile in bundling) with an adjustment deadline by June 23, 2017. On the basis of the above Decision, in September 2017, AGCom initiated a sanctioning procedure against TIM, which concluded with a sanction of 1.16 million euros together with the obligation to return the higher amounts arising from the 28-days billing cycle (Decision 499/17/CONS). TIM challenged this provision before TAR with a request to suspend the decision. On February 21, 2018, the Lazio TAR suspended the enforcement of the Decision with respect to its requirement that operators return the additional amounts invoiced since June 23, 2017 under the 28-day billing regime. A Decision on the merits has been postponed to the next hearing, which is scheduled to be held on November 14, 2018.

In December 2017, Law no. 172/17, which institutes the obligation of a monthly billing for all electronic communication services with an adjustment deadline by April 5, 2018, was approved. In compliance with the law, TIM is applying the monthly invoicing from March 5, 2018 for mobile offers and from April 1, 2018 for fixed offers.

On February 19, 2018, AGCM started the proceeding I820 to identify possible anticompetitive agreements between the main mobile and fixed operators to coordinate the marketing strategy in the implementation of the obligations established by the Law 172/2017. On March 21, 2018, as a precautionary measure, AGCM warned TIM and other operators to terminate the above-mentioned alleged anticompetitive agreement related to the repricing of their commercial offers. On April 11, 2018 AGCM confirmed the precautionary measure for all the operators involved. For additional details see 4.3.12. Antitrust Issues . On March 8, 2018, with Decision 112/18/CONS, AGCom warned TIM to postpone the date of invoices issued at the moment of the restoration of the monthly invoicing for a number of days equal to those alleged to have been illegitimately invoiced since June 23, 2017 and at the same time withdrew the obligation to return the higher amounts arising from the 28-days billing cycle established in the Decision 499/17/CONS. Analogous decisions have been issued against the other operators. Following operators appeal before TAR, on April 9, 2018 AGCom with Decision 9/18/PRES cancelled the provision of Decision 112/18/CONS which established that the postponement of the date of invoices must occur at the moment of the restoration of the monthly invoicing and it summoned TIM and the other operators in order to define the date after which the operators must postpone the date of the invoices to reimburse the customers.

**4.3.7 QUALITY OF SERVICES****v *The measures to test the quality of the data service on fixed networks***

AGCom Decision 244/08/CSP and its modifications, namely Decision 151/12/CONS introduced the following obligations on quality measures:

- Internet Service Provider ( **ISP** ) measurements: the measures of the access quality of the most common retail offers are made by an independent body, in the geographical areas of the main towns, for each ISP; and
- End-user measurements: allows a user to measure his own fixed broadband line performances with dedicated software called **Ne.Me.Sys** . Each customer can formally certify the quality of his own fixed-line broadband

access using this software and can compare the results with the advertised performances. These results could be used by customers to terminate the contract with the ISP without penalties or to claim Quality of Service ( **QoS** ) parameters levels to be restored. If the results are lower than those advertised, the user may submit a complaint to the provider which is obliged to improve the quality within 30 days. The user may terminate the contract without penalties if a second measure confirms the parameters.

Both measurement methods employ the same Network Measurement System, based on a software agent running on a standard Personal Computer.

v ***The measures to test the quality of the data service on mobile networks***

AGCom Decision 154/12/CONS and its modifications, namely Decision 580/15/CONS, introduced an obligation to carry out statistical measures by mobile network operators (TIM, Vodafone and Wind/Tre).

The measures are based on campaigns of field measurements (drive test) carried out by a third party (the Ugo Bordoni Foundation).

The surveys concern 40 Italian cities (usually the two most populous cities in each region) and roads and highways that connect the cities affected by the measures.



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The measurement methods used include **nomadic measures** (with a stationary vehicle) in urban areas, anywhere in the city and **dynamic measurements** (with a moving vehicle), carried out during movements inside or between cities.

**4.3.8 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 remain ongoing.

Furthermore, with Decision 133/17/CIR, AGCom submitted to public consultation the universal service net cost results for the years 2008-2009 with which it proposes to set the net cost value for the year 2009 to 6.7 million euros. A final decision is expected by the end of April 2018.

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 proceeding is still pending.

With decision 456/16/CONS (October 2016), AGCom, dismissing TIM's proposal to increase the Voce offer prices (April 2016), introduced a strict procedure for future variations of the retail prices regulated under the USO, providing, for example, a time period of at least one year between two subsequent tariff changes and the possibility to change the prices only with reference to: (i) increase in wholesale costs; (ii) inflation recovery; and (iii) socio-economic conditions. TIM reserved the right to challenge the Decision on the Voce offer before the TAR of Lazio.

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Finally, with decision 46/17/CONS, starting in June 2017, AGCom introduced new measures on concessional economic conditions to access fixed and mobile services to the benefit of specific categories of disable customers. The provisions of the measure, applying to deaf, blind and partially sighted people, extends the previous concessions, both in terms of concessional services (for example, flat voice and data offers) and of the relevant disabled categories (for example, partially sighted people).

v **Public Telephony**

In 2010, AGCom established that the criteria regarding the distribution of public payphones in Italy was no longer consistent with the current social needs and removed any quantitative obligations for TIM (i.e. the obligation to install a specified number of payphones). As a consequence, TIM is authorized to remove the unprofitable coin-boxes after a consultation with the city councils and the interested citizens. At the end of 2017, the total number of public payphones was about 46,100.

**4.3.9 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 and they have given rise to a series of litigation proceedings and appeals among TIM, AGCom and other operators.

With respect to the 2016 and 2017 contribution fees, AGCom confirmed, notwithstanding the judgment of the Administrative Court (TAR) of Lazio and the following judgment of the Council of State, both issued in 2015, the methodology used in the previous years rather than applying the principle that administrative charges imposed on the undertakings should only finance costs related to activities exclusively related to *ex ante* regulation and that there should be balance between these administrative costs imposed on undertakings and the total cost related to these activities.

On February 6, 2017, AGCom issued Decision 463/16/CONS on the payment of AGCom contribution for the year 2017 (calculated on the 2015 financial statement data). The guidelines for the calculation of contribution fees are unchanged from the guidelines for the calculation of the 2016 fee.

In particular, on March 31, 2017, TIM paid 19.3 million euros calculated on a revenue basis, under reserve, applying the 2017 AGCom rate of 1.4 per thousand (Decisions 463/16/CONS and 62/17/CONS).

On January 15, 2018, AGCom issued Decision 426/17/CONS on the payment of AGCom contribution for the year 2018 (calculated on the 2016 financial statement data). The guidelines for the calculation of contribution fee are unchanged from the guidelines for the calculation of the 2017 fee. For the year 2018, AGCom decreased the rate from 1.4 per thousand to 1.35 per thousand.

**4.3.10 BROADBAND AND DIGITAL DIVIDE**

v **Government's plans for UBB networks**

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 **Tender** ). Approximately 2.9 billion euros of this amount have been allocated. 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 for download and 50 Mbit/s for upload, while the remaining 30% have to reach at least 30 Mbit/s for downloads and 15 Mbit/s for uploads. In Cluster D, 100% of connections have to reach at least 30 Mbit/s for downloads and 15 Mbit/s for uploads.

On June 3, 2016 Infratel published a first call for tender (the **First Tender** ) of 1.4 billion euros for deploying, and managing under concession an UBB passive infrastructure (ducts and dark fiber) in the white areas of 6 regions (Abruzzo, Molise, Emilia Romagna, Lombardia, Toscana and Veneto) and, on October 17, 2016 the qualified operators (TIM, Open Fiber S.p.a. ( **OF** ), E.Via S.p.a. and Estra S.p.a.) submitted their technical-economical offers.

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On August 8, 2016, Infratel Italia called for a second tender on the ultrabroadband white areas identified in 10 other 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 value of public financing equal to approximately 1.25 billion euros (the Second Tender). Despite TIM was pre-qualified also for this second tender, TIM decided to not submit any bids in line with what it communicated to the Ministry of Economic Development and Infratel Italia. In fact, TIM updated its investment plan at the end of 2016, planning to roll-out ultrabroadband network coverage selectively to some white areas of the Regions included in the Infratel tender process.

On March 7, 2017, Infratel Italia awarded the company Open Fiber with all the five lots of the First Tender after technical and economic sustainability analyses (in the light of the Public Procurement Code Decree by Law 50/2016) carried out on the OF offers made public on January 24, 2017. The publicly subsidized infrastructure is to remain public property and to be allocated under a 20-year concession to the operator awarded the tender lots.

On July 28, 2017, Infratel Italia awarded all the lots of the Second Tender to Open Fiber.

On October 2, 2017, Infratel began a public consultation about investment plans by private operators in the ultrabroadband white areas of the regions of Calabria, Puglia and Sardegna, with the aim to publish, by the first half of 2018, a third call for tender for the coverage of the residual ultrabroadband white areas not covered by private operators plans.

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.

Phase II of the UBB Plan has to be notified to and approved by the European Commission. The details of the intervention model in grey areas are not yet known.

**4.3.11 PRIVACY AND DATA PROTECTION**

TIM must comply with Italy's Personal Data Protection Code (Legislative Decree June 30, 2003 n. 196), which has been in force since January 1, 2004.

The Privacy Code is divided into three parts: (1) general data protection principles; (2) additional measures applicable to organizations in certain areas, including telecommunications services; and (3) sanctions and remedies.

The Privacy Code applies to all data processing within Italy and also affects organizations not based in Italy but using equipment located in Italy, such as computer-based systems.

According to the Code, personal data shall be processed lawfully and fairly, retained accurately and up to date and must not be excessive or stored for a longer period than needed. Therefore, information systems shall be configured in order to minimize the use of personal data.

The data subject (any natural person that is the subject of the personal data) and the subscriber (any natural or legal person who or which is party to a contract with the provider of publicly available electronic communications services, or is the recipient of such services by means of pre-paid cards) shall receive preliminary information on the purposes and modalities of data processing.

Prior consent of the data subject is needed to process personal data, except in specific cases (i.e. obligations imposed by law or by a contract with the data subject). Furthermore, the data subject has the right to access his/her personal data and to obtain information on the purposes and methods of the processing.

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The General Data Protection Regulation 2016/679/EU ( **GDPR** ) will be directly applicable in all Member States from May 25, 2018 and, in Italy, it will replace the incompatible provisions of the Italian privacy Code.

The GDPR will:

- apply both to companies established in the EU and to companies not established in the EU but that offer their services in the EU or that monitor the behavior of individuals in the EU;
- include a right to data portability;
- contain new obligations for companies, for instance notifications of personal data breaches and designating a Data Protection Officer ( **DPO** );
- set up a one-stop-shop whereby companies will only have to deal with a single national Data Protection Authority ( **DPA** ) in cross-border data protection cases;
- establish a new European Data Protection Board ( **EDPB** ) consisting of the heads of national DPAs (replacing the current Article 29 Working Party) and with the power to adopt binding decisions; and
- contain fines up to a maximum of 20,000,000 or 4% of the total worldwide turnover of a company (whichever is higher).

The GDPR strengthens the protection of the individual's right to personal data protection and requires significant adjustments in certain aspects, introducing (among others):

- a new territorial scope, applying both to companies established in the EU and to companies not established in the EU but that offer their services in the EU or that monitor the behavior of individuals in the EU;
- the principles of data protection by design and by default to address data protection issues from the start;
- stronger individual rights; the Regulation introduces new transparency requirements strengthening rights of information, access and erasure;
-

the new right to data portability, allowing citizens to ask a company or an organization to receive back personal data he provided to that company on the basis of consent or contract;

- stronger protection against data breaches;
- the accountability principle: more flexibility for controllers and processors processing personal data due to unambiguous provisions on responsibility. For this purpose a new tool is introduced in order to help to assess the risk before one starts with the processing: the data protection impact assessment ( PIA ) as well as increased penalties, up to 4% of the total worldwide turnover of the company, for infringements of the regulation obligations; and
- the designation of a Data Protection Officer ( DPO ).

TIM has put in place a specific project, in order to carry out all the activities needed to ensure its compliance with the new rules that the GDPR will introduce.

v ***Italy s Privacy Provisions Related to Specific Processing Operations in the Electronic Communications Sector***  
Italian Communication Service Providers ( CSPs ) must comply with strict specific obligations that apply only to the electronic communication sector, which are provided by a specific section of the Privacy Code that transposes the relevant EU Directives.

Notably, with respect to data retention, CSPs are allowed to retain traffic data for a six-month period in order to deal with disputes over billing and subscriber services. CSPs are also required to retain telephone and electronic communications traffic data for the purpose of detecting and preventing crimes. The data retention terms for crime prevention and prosecution provided by the Italian Data Protection Code are: 24 months for telephony traffic (fixed and mobile); 12 months for electronic communications traffic; and 30 days for unsuccessful call attempts. However, over the course of 2015 and 2016, Decree no. 7/2015, on urgent antiterrorism measures, and the subsequent Law no. 21/2016, introduced transitional rules according to which telephone and electronic communication traffic data, as well as unsuccessful call attempts, generated after April 21, 2015 must be retained until June 30, 2017. Such transitional provisions will cease to apply on July 1, 2017.



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Traffic data must be kept and controlled in compliance with general provisions issued by the Italian Data Protection Authority ( **Garante per la protezione dei dati personali** ), which requires CSPs to adopt strict security measures.

Moreover, customer profiling in the electronic communications sector is regulated by the Italian Data Protection Authority. CSPs must obtain the consent of the data subject for profiling based on individual and detailed personal data, while prior approval of the Italian Data Protection Authority is needed to process aggregated personal data without the data subject's consent.

Concerning direct marketing activities, the general rule is the **opt-in system**. Nevertheless the Privacy Code also allows the processing of personal data obtained from directories of subscribers, in order to carry out operator-assisted telephone calls for commercial purposes. Such processing is possible in respect of any entities (i.e. subscriber) that have not exercised their right to object by having the respective telephone numbers entered in a public opt-out register, which came into force on February 1, 2011.

Finally, CSPs must adopt technical and organizational measures that are adequate in the light of the existing risk, in order to safeguard the security of their services and to take measures when breaches of personal data occur. Such measures must protect personal data against the risk of their accidental or unlawful destruction or loss and of unauthorized access to the data or of processing operations that are either unlawful or inconsistent with the purposes for which the data have been collected.

Under the Privacy Code, in case of a personal data breach (a security breach leading, accidentally or not, to the destruction, loss, alteration, unauthorized disclosure or access to personal data transmitted, stored or otherwise processed in the context of the provision of a publicly available communications service) the provider shall inform without delay the Italian Data Protection Authority (currently the Italian Data Protection Authority specified the term in 24 hours for the first communication and in other 3 days for the communication of further details). Moreover, where the breach is likely to adversely affect the personal data or privacy of a subscriber or other individuals, the provider must also inform them within 3 days.

Another relevant provision regards cookies. Article 122 of the Privacy Code sets out that storing information, or accessing information already stored in the terminal equipment of subscriber/user (i.e. by cookies or similar tools such as web beacons, web bugs, clear GIFs or others), shall only be permitted on condition that the subscriber/user has given his prior consent after being informed by simplified arrangements. Subscriber/users' prior consent is not necessary to install the technical cookies, which are those used exclusively with a view to carrying out the transmission of a communication on an electronic communications network, or insofar as this is strictly necessary to the provider of an information society service that has been explicitly requested by the contracting party or user to provide the said service.

On May 8, 2014, the Data Protection Authority adopted a general provision relating to Simplified Arrangements to Provide Information and Obtain Consent Regarding Cookies, requiring that concerned entities be compliant with the simplified arrangements, pursuant to Article 122 of the Privacy Code, by June 2, 2015.

TIM implemented the requested measures to comply with the above mentioned provision.

v ***Review of directive EU 2002/58 (ePrivacy Directive)***

The European Commission put forward its Proposal for a Regulation on ePrivacy, which will replace the current Directive 2002/58/EC on privacy in electronic communications and will complement the GDPR, confirming the principle of confidentiality of communications (which is not specifically included in the GDPR) and addressing specifically the processing of traffic and location data (metadata) generated by providers of e-communications networks and services.

The text proposes that the principle of confidentiality be extended to new services provided by OTTs, such as e-mail and messaging services. However, the proposed text fails to sufficiently align with the GDPR, as it basically maintains the current rules on how e-communication services providers will be able to process traffic and location data (metadata). With very few exceptions related to the service provision, billing purposes and security,

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providers will have to request consent from the end-user for processing their data. Otherwise, metadata must be erased or made anonymous as soon as the communication has taken place, if none of the lawful grounds mentioned apply.

The proposed rules do not recognize legitimate interest as legal grounds or the possibility of compatible further processing when the processing is not based on consent. As set by the new GDPR, such additional processing should be allowed when compatible with the purpose for which data was initially collected and appropriate safeguards like pseudonymisation have been taken.

National Data Protection Authorities will be responsible for the enforcement of the ePrivacy Regulation that replicates the scheme of fines of the GDPR.

The Parliament approved amendments to the Commission proposal in October 2017, while discussions in Council are still ongoing. Therefore, a swift adoption, necessary to guarantee the simultaneous application of ePrivacy regulation and GDPR in May 2018, appears unrealistic. The regulation is expected to be adopted by the end of 2018.

**4.3.12 ANTITRUST ISSUES***v Antitrust in Italy***Ø 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.

Ø **Proceedings**

- **Proceeding A428C** : on July 17, 2015, TIM received the filing from a proceeding concerning a possible infringement of the order contained in the A428 Decision from May 2013 with reference to the abuse of dominant position related to the supply of wholesale services to AltNets. On January 13, 2017, the Antitrust Authority (AGCM) notified TIM of its decision, acknowledging that TIM had fully complied with resolution A428 and that the conditions for imposing sanctions for non-compliance did not apply. AGCM also acknowledged that TIM's conduct following the 2013 resolution has been focused on improving performance in connection with the provision of wholesale access services that concerned the services subject to investigation and new ultrabroadband access services. AGCM also acknowledged the positive impact of the implementation of the TIM's New Equivalence Model ( **NEM** ), which remains ongoing. AGCM's decision requires TIM to: i) carry on with the implementation of NEM, which is to be completed by April 30, 2017 and ii) inform the AGCM on the levels of performance of the wholesale access services provisioning systems and on the completion of the related project of internal re-organization by May 2017. At the end of May 2017, TIM filed the information required, providing evidence of NEM implementation and data about the performance level of wholesale access services. On August 9, 2017 AGCM confirmed its positive assessment based upon the above mentioned information.

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- **Proceeding A500B** : on November 16, 2016, AGCM notified TIM the opening of an investigation for alleged abusive behaviors in the market of Bulk SMS services. TIM would have hampered competition by abusing its dominant position in the market of SMS termination on its own network. The proceeding was initiated by a notification of the operator Ubiquity, active in the segment of the SMS alert services for the banking and financial sectors, in competition with TIM and other mobile operators, Vodafone included. In the complaint Ubiquity claims that TIM is applying wholesale prices that make unprofitable the provision of the retail services for the non-vertically integrated competitors such as Ubiquity. AGCM set November 30, 2017 as the deadline to close the procedure. An analogous charge has been addressed to Vodafone, against which AGCM started a separate enquiry, assuming an alleged analogous abuse of dominant position. . On April 12, 2017 AGCM decided to extend the investigation to Telecom Italia Sparkle S.p.A., a wholly owned subsidiary of TIM. On July 28, 2017, AGCM issued its preliminary findings (the so called Statement of Objections) confirming the existence of an abuse of a dominant position by TIM. On December 13, 2017, AGCM issued its final decision imposing a fine of approximately 3.7 million euros on TIM for having abused its dominant position in the market. On February 26, 2018, TIM appealed the decision before the TAR Lazio.
  
- **Proceeding I799** : On February 1, 2017, following complaints by Wind, Vodafone and Enel, AGCM opened a proceeding against TIM and Fastweb to assess potential anti-competitive agreements stemming from the creation of the joint venture Flash Fiber, aimed at deploying, in a cooperative manner, a FTTH (Fiber To The Home) network in 29 cities. In order to reach a conclusion of the proceedings without a finding of infringement, TIM decided to provide a proposal of commitments with some amendments to the undersigned agreement. On April 9, 2018, AGCM notified TIM and Fastweb the approval of the proposed commitments and closed the proceeding without the imposition of any fine.
  
- **Proceeding A514** : On June 28, 2017, AGCM opened case A514 against TIM, aimed at assessing likely breaches of Article 102 of TFEU, based on claims raised by Infratel, Enel, Open Fiber, Vodafone and Wind Tre in May and June 2017. The investigation aimed at assessing whether TIM abused its dominant position both in the wholesale access and retail services markets, with respect to the fixed broadband and ultra-broadband network. Specifically, AGCM asserts that TIM may have acted to:
  - slow down and hinder the execution of Infratel tenders with the aim of either delaying or making the entry to the wholesale market of another operator less profitable; and
  - adopt pre-emptive strategies to lock in customers in the retail ultra-broadband markets, by means of commercial policies aimed at reducing the attractiveness of end-users for competitors, thus lowering competition.
 On February 14, 2018, AGCM extended the scope of the investigation assuming that TIM may have applied, in the provision of BB and UBB wholesale access services, economic conditions to hinder infrastructure competition and limit competition for customers that purchase wholesale services.

The end of the proceedings is expected by October 31, 2018.

**I820**

On February 7, 2018, AGCM announced the start of an investigation of TIM, Vodafone, Fastweb, Wind-Tre and the association of operators ASSTEL to ascertain whether those companies, together with the association, coordinated their commercial strategy, thereby breaching art. 101 TFUE.

The above-mentioned coordination is alleged to have resulted in the adoption of almost identical practices of implementing the obligation introduced by article 19 quinquiesdecies of the Law by Decree 148/2017 (converted into Law 172/2017), which requires electronic communications operators to implement billing cycle of one month (or month multiples) for fixed and mobile services.

On March 21, 2018, as a precautionary measure, AGCM warned TIM and the other operators to terminate the above-referenced alleged anticompetitive agreement relating to the repricing of their commercial offers. The precautionary measure was confirmed by AGCM on April 11, 2018 for all the operators involved.

The deadline to close the proceeding is set for March 31, 2019.

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TIM is subject to the European competition law. European competition policy was developed from rules set out in the Treaty on the Functioning of the European Union (**TFEU or Treaty** ) and covers anticompetitive practices and abuse of dominance, mergers and state aid:

- anticompetitive practices: agreements between two or more independent market operators which restrict competition are prohibited by Article 101 of the Treaty on the Functioning of the European Union. This provision covers both horizontal agreements (between actual or potential competitors operating at the same level of the supply chain) and vertical agreements (between firms operating at different levels, i.e. agreement between a manufacturer and its distributor). Only limited exceptions are foreseen in the general prohibition. The most obvious example of illegal conduct infringing Article 101 is the creation of a cartel between competitors (which may involve price-fixing and/or market sharing);
- abuse of dominance: Article 102 of the Treaty prohibits firms holding a dominant position on a determined market to abuse that position, for example by charging unfair prices, by limiting production, or by refusing to innovate to the prejudice of consumers;
- mergers: the EC is responsible for reviewing mergers if the annual turnover of the combined businesses exceeds specified thresholds in terms of global and European sales. In such cases, the EC must be notified of the transaction. Transactions falling below these thresholds may be reviewed by the national competition authorities in the EU Member States; and
- state aids: public aid distorting competition and trade within the EU are prohibited (Art. 107 of the Treaty). State aid is defined as an advantage in any form whatsoever conferred on a selective basis to undertakings by national public authorities. Therefore, subsidies granted to individuals or general measures open to all enterprises do not constitute State aid. Furthermore, the EC Treaty provides that in some circumstances, government interventions are necessary for a well-functioning and equitable economy, stating some exceptions and sector specific rules. The Guidelines for the application of State aid rules in relation to rapid development of broadband networks establish that public funding of broadband projects is not considered state aid if one of three exemptions are used:
  - the public authority invests under the same conditions that would be applied to a private investor (Market Economy Investor Principle **MEIP** );
  - the public contribution is limited to the compensation of the provision of a service of general economic interest (Services of General Economic Interest principle- **SGEI** );

- it meets certain conditions (promoting the economic development of underdeveloped areas, promoting the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State, facilitating the development of certain activities or areas, promoting culture and heritage conservation).

The EC is empowered by the Treaty to apply these prohibition 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.



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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 competition and 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 services.

With regard to the operational activity of TIM Brasil, ANATEL developed regulations for mobile communication services (**SMP** - Personal Mobile Services), fixed communications services (Serviço Telefônico Fixo Comutado or **STFC**) and data transmission and multimedia services (**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.

**v 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 services. 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 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 multimedia services.

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According to Brazilian law, Internet access is considered a value-added service, and providers of Internet services are not considered to be telecommunications operators.

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.

v **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.

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. 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 0.05 (five cents) reais and, on February 24, 2018, it will be reduced to 0.03 (three cents) reais.

ANATEL is currently reviewing the interconnection regulation and, as a result of such process, current practices regarding interconnection agreements may have likely to be revised.

Interconnection agreements are subject to prior approval by ANATEL.

v **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.

Fixed networks in fiber optics are benefiting from a regulatory holiday of nine years, which has to be confirmed after a public consultation to be launched in 2016 when the relevant markets, SMP operators and the remedies applied will be revised.

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.

TIM Brasil has been identified as having SMP in the wholesale markets of mobile termination, national roaming and access to Towers. The measures applied to a SMP operator in those markets include:

- a glide path on mobile termination rates based on a price cap system;
- an obligation to offer the service of national roaming to operators not having SMP: regional licensed CTBC and Sercomtel and national licensed Nextel; and
- an obligation to present a Reference Offer of Towers, with regulated price and conditions.

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The second analysis and definition of SMP operators was held in 2015 confirming the previous decision of 2012 and the remedies imposed on TIM Brasil remained unchanged.

The review of the markets susceptible to be regulated and the remedies applicable to SMP operators is ongoing. Public consultation was held in 2017, but the Regulation is still to be released.

**Ø 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.

**Ø 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-

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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.

**Ø 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.

**Ø 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 n° 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 authorizations 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. The 700 MHz spectrum was available for LTE activation by TIM for more than

3,500 cities. Currently about 1,000 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 incumbent mobile operators (Vivo, Claro, and Oi) were not eligible to bid for any spectrum in the 1800 MHz band because of existing spectrum caps.

Ø **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.



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**Regulation**

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.

**Ø 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.

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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, a new Presidential Decree is expected in 2018 with the goal of updating and consolidating, in a single instrument, the public policies for the telecommunications in Brazil. The proposal places broadband at the center of public policy of Brazilian telecommunications. This decree, submitted for public consultation in October 2017, revokes and replaces three other decrees currently in force, bringing together in a single instrument the regulatory guidelines for the expansion of broadband services and digital inclusion in the country. The Decree will repeal Decree No. 4,733/2003, which provides 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. The decree will also establish public and private investment priorities for the expansion of telecommunications infrastructure through fiber optics, radio and satellite.

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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** ).

**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:

- **Iran**: KFZO-TKC (former Payam Kish), Gostaresh Ertebatat Taliya PJS (former Taliya), Rightel Communication, Irancell (**MTN**), Mobile Company of Iran (MCI) and Kish Cell Pars Co. Telecomm co;
- **North Korea**: none;
- **Sudan**: Sudanese Mobile Telephone (former ZAIN SD) and MTN Sudan, Sudatel Telecom Group, Canartel;
- **Syria**: MTN Syria (former Spacetel Syria 94 and former Areeba), Syriatel Mobile Telecom SA ( **Syriatel** ) and Syrian Telecom Establishment (STE).

(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:

	<b>Year ended December 31, 2017 (thousands of euros)</b>
Revenues	8,327
Expenses	11,259
Receivables	34,568
Payables	39,740

**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 Celular 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).

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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 2017, our total revenues from roaming agreements with networks of the Designated Countries are detailed as follows:

	<b>Year ended December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	59
Sudan	20
Syria	9
<b>Total revenues from roaming agreements</b>	<b>88</b>

In 2017, our total charges from roaming agreements with networks of the Designated Countries are detailed as follows:

	<b>Year ended December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	397
Sudan	87
Syria	9
<b>Total charges from roaming agreements</b>	<b>493</b>

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As of December 31, 2017, our total receivables from roaming agreements with networks of the Designated Countries are detailed as follows:

	<b>As of December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	696
Sudan	68
Syria	41
<b>Total receivables from roaming agreements</b>	<b>805</b>

As of December 31, 2017, our total payables from roaming agreements with networks of the Designated Countries are detailed as follows:

	<b>As of December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	2,606
Sudan	27
Syria	77
<b>Total payables from roaming agreements</b>	<b>2,710</b>

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 2017, our total revenues from traffic from networks located in the Designated Countries to our networks are detailed as follows:



	<b>Year ended December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	470
Sudan	3,048
Syria	3,360
<b>Total revenues from traffic</b>	<b>6,878</b>

In 2017, our total charges from traffic to networks in the Designated Countries from our networks are detailed as follows:

	<b>Year ended December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	193
Sudan	4,050
Syria	6,523
<b>Total charges from traffic</b>	<b>10,766</b>

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As of December 31, 2017, our total receivables from traffic from networks located in the Designated Countries to our networks are detailed as follows:

	<b>As of December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	4,902
Sudan	12,230
Syria	15,861
<b>Total receivables from traffic</b>	<b>32,993</b>

As of December 31, 2017, our total payables from traffic to networks in the Designated Countries from our networks are detailed as follows:

	<b>As of December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	4,921
Sudan	12,752
Syria	19,357
<b>Total payables from traffic</b>	<b>37,030</b>

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 2017, our total revenues from Commercial Sale and Other Agreements with the Designated Countries are detailed as follows:

	<b>Year ended December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	
Sudan	388
Syria	973
<b>Total revenues from commercial sale and other agreements</b>	<b>1,361</b>

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As of December 31, 2017, our total receivables from Commercial Sale and Other Agreements with the Designated Countries are detailed as follows:

	<b>As of December 31, 2017 (thousands of euros)</b>
North Korea	
Iran	
Sudan	770
Syria	
<b>Total receivables from commercial sale and other agreements</b>	<b>770</b>

\* \* \*

**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.

**Table of Contents****Item 4. Information On The TIM Group****Glossary of Selected Telecommunications Terms****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).

**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 (3<sup>rd</sup> 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 .

**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.

**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.

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**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).

**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.



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**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.

**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 (restricted access, dedicated pricing, ).

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

**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.

**Decommissioning.** The disposal of old 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.

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

**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.

**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.

**Digital divide.** The gap between people with effective access to digital and information technology and those with very limited or no access at all. The term encompasses, among other things: gaps in ownership of or regular access to a computer or internet access due to being located in geographical areas with no broadband connectivity.

**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.

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**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.

**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.

**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 ).** It is 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.

**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.

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**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.

**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.

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

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

**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.

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**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.

**Lambda.** Represents the single optical channel on which a signal is transmitted in fiber-optic networks.

**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.

**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.

**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).

**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.



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**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.

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

**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.

**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.

**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.

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**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.

**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 such as the planning, construction and hosting services of a telecommunications management system and, ultimately, the management of the entire telecommunications system.

**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 is 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.

**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.

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

**SDH Standard (Synchronous Digital Hierarchy).** The European standard for high-speed digital transmission. It is 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 aims to transform traditional networks into flexible and intelligent platforms to satisfy in real time the bandwidth requirements and the dynamic nature of digital applications.

**Service Provider.** The party that 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.

**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 (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.

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**STB (Set-Top Box).** It is 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.

**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.** It is 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.



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**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).** 2<sup>nd</sup> 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.

**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

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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.

**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: ADSL (Asymmetric DSL), HDSL (High-data-rate DSL), VDSL (Very high bit rate DSL) and eVDSL (enhanced Very high bit rate DSL). This technology uses a digital signal at very high frequencies in order to achieve high data transfer rates.

**Table of Contents****Item 4. Information On The TIM Group****Description Of Property, Plant And Equipment****4.6 DESCRIPTION OF PROPERTY, PLANT AND EQUIPMENT****General**

As of December 31, 2017 and 2016, property, plant and equipment owned and leased are detailed as follows:

	As of December 31, 2017				As of December 31, 2016			
	Owned	Leased	Total property, plant and equipment (millions of euros, except percentage)	% of total property, plant and equipment	Owned	Leased	Total property, plant and equipment	% of total property, plant and equipment
Land	213	16	229	1.4	203	16	219	1.3
Civil and industrial buildings	488	1,768	2,256	13.6	509	1,835	2,344	14.3
Plant and equipment	12,049	353	12,402	75.0	11,709	365	12,074	73.8
Manufacturing and distribution equipment	36		36	0.2	38		38	0.2
Other	376	138	514	3.1	391	125	516	3.2
Construction in progress and advance payments	1,054	56	1,110	6.7	1,097	72	1,169	7.1
<b>Total</b>	<b>14,216</b>	<b>2,331</b>	<b>16,547</b>	<b>100.0</b>	<b>13,947</b>	<b>2,413</b>	<b>16,360</b>	<b>100.0</b>

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, 2017, 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.

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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, we expect to complete the above-mentioned real estate project, in respect of the remaining medium and small properties, with the aim of reducing rental 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, 2017, the domestic fixed network had the following figures:

Central Offices	approximately 10,361
Switching areas	547
Gateway areas (TDM)	33
Aggregation areas	12
Copper network	114.6 million kilometers-pair <sup>4</sup>
Fiber optic access/carrier network	14.3 million kilometers-fiber
Long Distance VC4	4,889
Long Distance Lambda (l)	828 l at 1 Gbps, 59 l at 2.5 Gbps and 1,299 l at 10 Gbps
Broadband/ADSL network	9,690 Central Offices covered
Main PoP data networks	32

**Fixed Voice network.** The Fixed Voice Network dedicated to serving traditional voice (**TDM**) consists of 587 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 114.6 million km of copper pairs, mainly in the distribution network, and also 14.3 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 Mbit/s to 10 Gbit/s. 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 4,889 VC-4 on the SDH Arianna, Phoenix, Phoebe, Kosmos networks. It supports also 828 lambda at 1 Gbps, 59 at 2.5 Gbps point to point optical channels and 1,299 at 10 Gbps point to point optical channels on the optical DWDM systems and on the **Kaleidon** network.

<sup>4</sup> in 2016 TIM adopted a new copper twisted pair counting system which influenced the measures in some CO Areas.



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Kaleidon is the new national optical transport platform that allow to set up a completely photonic optical mesh network. Kaleidon supports optical channels at 40 Gbit /s and 100 Gbit /s 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.

**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 2017, the xDSL services for residential and business customers (retail and wholesale) covers more than 99.4% of the population and have been extended to 7,706 towns, including S. Marino (town covered minimum at 70%).

At the end of 2017, 9,690 local switching areas were covered by ADSL technology (compared to 9,666 at the end of 2016).

**NGAN (Next Generation Access Network).** NGAN (Next Generation Access Network). In 2017 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 Mbit/s.

In 2015 TIM, continuing FTTCab deployment, initiated a project to bring FTTH to 30 cities by 2019 (and other 59 BUL<sup>[2]</sup> cities) with the aim of improving ultrabroadband service to 200 Mbit/s and to 1 Gbit/s for FTTH.

More than 18,700,000 households had been reached by the end of 2017, through approximately 4,900 distribution central offices. The NGAN coverage in FTTH/Cab was approximately 77% of reached households at the end of 2017 (the reached households in FTTH numbered more than 2,240,000, with a coverage of more than 9%).

At the end of 2017, about 111,000 cabinets NGAN were reached with fiber optic cables (of which about 89,900 cabinets were installed with completely active service).

***Domestic (Italian) Mobile Network***

The domestic mobile network consists of:

- GSM network (2G: second generation network);
- UMTS network (3G: third generation network); and
- LTE network (4G: fourth generation network).

On December 31, 2017, TIM domestic mobile network had the following figures:

<sup>[2]</sup> BUL is an Italian acronym (Banda UltraLarga) referring to a public funding project aimed to development of ultrabroadband infrastructure.

**Table of Contents****Item 4. Information On The TIM Group****Description Of Property, Plant And Equipment****GSM/EDGE network**

- 14,352 BTS (Base Transceiver Station) GSM radio station (14,616 BTS at the end of 2016): -1.8% due to the GSM@1800 MHz refarming towards new technologies (LTE); approximately 950 of them are µBTS;
- 437,216 radio channels (719,594 at the end of 2016), -39.2% due to voice traffic migration from 2G to 3G and dismissal of 2G 900 MHz channels in order to develop UMTS 900 MHz coverage;
- 96 BSC (Base Station Controller) (97 at the end of 2016);
- 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**

- 20,728 node B UMTS radio base station (18,487 node B at the end of 2016) +12.1%;
- 3,057,396 radio channels (2,728,295 radio channels at the end of 2016) +12.1%;
- 119 RNC (Radio Network Controller) (120 at the end of 2016): -1 RNC compared to 2016 due to the adoption of new generation equipment with superior performance;
- GSM/UMTS Core Network: 50 MSC-server (Mobile Switching Center/Gateway), 92 access MGW (Media Gateway), 13 transit MGW, 4 IP STP (Signalling Transfer Point), 6 TSC-server (Transit Switching Center), 42 HLR (Home Location Register), 4 GGSN (Gateway GPRS Support Node).

In 2017, TIM continued implementation of the plan to distribute the High Speed Downlink Packet Access ( **HSDPA** ) and the High Speed Uplink Packet Access ( **HSUPA** ); these systems aim to increase the overall data transmission speed offered by UMTS.

In particular the HSDPA at 42 Mbit/s coverage level has overstepped 88.2 % of the resident population.

**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.

At the end of 2017, LTE network coverage is approximately 98% of the national population.

- 19,358 enode B (13,391 at the end of 2016) +44.6%;

- LTE core network is undergoing a technological upgrade and currently includes: 12 SPGW (Packet Data Network/Serving Gateway), 12 MME<sup>2</sup> (Mobility Management Entity) all using triple access 2G/3G/4G technology, 6 HSS (Home Subscriber Server) Front End and 15 CUDB (Centralized User Database) according to Data Layered Architecture, 6 Mobile Broadband Policy Manager.

As of the end of 2017, the IMS core Network includes 4 CSCF (Call session Control Function), 4 MTAS (Multimedia Telephony Application Server) and 2 VoLTE Policy Manager for handling voice services on LTE (VoLTE).

### ***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.

<sup>2</sup> An additional MME is devoted to the GSM-On-Ship service

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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 2017, new backbone capacity of 200 Gbps and new DWDM equipment were deployed over the London-Paris, New York-London and New York-Paris paths using spectrum over Flag Atlantic-1 submarine cable, acquired from Global Cloud Exchange. New 100Gbps was deployed over the City-Ring, i.e. an optical metro area network connecting TI Sparkle points on presence in the New York area.

With respect to the transport network, in 2017 the 200Gbps deployment of the ASN OTN level in Italy and Europe supplying of protected services, and 1,200Gbps in Europe and 200G in Italy for unprotected capacity services were completed; in the infrastructure that connects the POP TI Sparkle to Mazara to the Interoute landing station, the protection route has been completed and 100Gb has been deployed with respect to both Mazara-Palermo and Mazara-Catania routes.

With respect to IP backbone, new core equipment were deployed in Palermo and Istanbul to further optimize capital expenditure efficiency, network scalability and resiliency and to support increasing traffic. New 200Gbps optical backbone was deployed over the Milan Palermo, Milan-Frankfurt and Amsterdam-Milan routes. At the core level, upgrades at 100Gbps were carried out on Milan PoP, aimed at facilitating interconnection with a new national IP backbone. At the edge level, upgrades were carried out at 10/100Gbps in Marseille and a new edge router was deployed in Prague and Amsterdam, where new LAN-DCN were deployed in new Digital Reality site and Amsterdam TC1 was dismantled and decommissioned. In US, 10/100Gbps ports upgrades were carried out on the edge router in Jacksonville and on core routers in Newark and New York. Finally, Hamburg and Chicago PoPs were decommissioned.

A new router in Catania POP was deployed, dedicated to IP over SDH services.

An expansion of 400Gbps of the transmission ring from Singapore to Malaysia was carried out in partnership with a local operator. The new Singapore-Europe ring has been completed for the Ethernet over Dense services Wavelength Division Multiplexing (EoDWDM) and new 6x10 Gbps was deployed over the Palermo-Singapore route.

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An upgrade of 300Gbps of the Italy-Libya submarine cable was completed with the installation of the DWDM 100G equipment between Mazara and Palermo. And the upgrade of the Italy-Malta submarine cable to 200Gbps was completed.

With reference to TI Sparkle offer for multinational corporate, new PoPs were deployed in Moscow, Tirana and Puerto Rico. Moreover, new edge routers were added in existing PoPs in Paris, Newark, Miami, Singapore, Sofia and Istanbul; edge router in Amsterdam was also upgraded. In order to improve quality for the main customers, a dedicated 10 GB backbone was designed between the edge and core routers in the main POPs, 10 Gb was deployed in the Milan-Frankfurt, Milan-Paris and Frankfurt-London links.

With respect to voice and mobile services, VTCH modules (+480 equivalent data links) were also activated in the soft-switch for Sigtran signaling traffic (SS7 reporting on IP) in order to support the migration from SS7 to Sigtran of the interconnection with TIM for the management of the international roaming and the exchange of text messages. A decommission plan was initiated with respect to old SBC technology equipment. The Network Data Center of Milan (Malpaga) has also been integrated into the network for session services, on which the VoIP call handling modules of the soft-switch are hosted. Following this activation, the call handling of the VoIP traffic is entirely managed by virtual infrastructure.

The SMS Hub / Transit platform in Open-mind technology has been adapted for integration with the new routing design system in LCR (Least Cost Routing) logic.

The Spectra2 simulation tool was also adapted for the generation of new LTE service scenarios to support assurance activities.

The capacity of the Sigos system for end-to-end service testing has been increased.

The installation of the SMS Firewall platform was completed at the Movitel Angola operator to support the SMS Booster service.

The VoIP call handling capacity has been increased through the introduction of 4 virtual VTCHx modules (+32,000 equivalent circuits) and the deployment of new software release on SBC (Session Border Controller) devices. A new system was also introduced for monitoring the VoIP traffic which is able to analyze the quality of voice, detecting the presence of calls with poor vocal quality and one-way audio phenomena.

Geo-redundancy has been activated for the SMS messaging platform (SMS Hub services and SMS Transit), running in Milan and Rome sites, in order to ensure services continuity even in the event of isolation of a site, e.g. due to power shutdown or fiber connectivity outage.

**Mediterranean Backbone**

In 2017, network upgrades on both transmission and IP backbones were completed, in line with the sales plan in this area.

Technical infrastructure updates were carried out in the Catania, Athens, Chania and Istanbul data centers with the aim of increasing efficiency and reliability. A new data center has been released in Catania, for the deployment of a new

virtualized environment for network and IT technologies.

Enhancement of cloud infrastructure in Athens and Istanbul, through new appliances, has been completed.

### **Latin American Backbone**

In 2017, upgrades were carried out at 600G on the SAC cable including 40G on the Atlantic side and 200G on the Pacific side.

The construction of the SEBRAS-1 cable, in which TI Sparkle has three proprietary fibers, has been completed, with 2 Tera activated in the San Paolo-New York route.



**Table of Contents****Item 4. Information On The TIM Group****Description Of Property, Plant And Equipment*****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.

Of the 4.15 billion reais invested in 2017, 87% were dedicated to 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, expansion of heterogeneous (hetnet) coverage, 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 plans to increase site density by using Bio Sites, 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 infrastructure has a broad national reach, covering approximately 95% of the Brazilian urban population and more than 3,500 cities. The Company also has extensive data coverage, maintaining its leading position in 4G coverage in the country.

TIM Brasil maintained its leadership in 4G coverage, reaching 3,003 cities, or 91% of the country's urban population, an increase of approximately 140% in the number of cities covered as compared to 2016. To support this expansion, the number of 4G sites (e-NodeB elements) grew 77%, surpassing the number of 3G sites.

This significant expansion in 4G is supported by the implementation of spectrum refarming process, which uses the 1,800MHz band 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 916 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, to evolve into IP data network, ensuring efficiency and stability. Other benefits to users include simultaneous navigation through 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. 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.

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**Item 4A. Unresolved Staff Comments**

**Item 4A. UNRESOLVED STAFF COMMENTS**

None.

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*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 recognized to the extent that it is probable that economic benefits will flow to the Group and their amount can be measured reliably. Revenues are stated net of discounts, allowances, and returns.

· *Revenues from services rendered*

Revenues from services rendered are recognized in the separate consolidated income statement according to the stage of completion of the service and only when the outcome of the service rendered can be estimated reliably.

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 when the information or content is delivered to the customer. In the event that the Group is acting as agent, only the commission received from the content provider is recognized as revenue.

Revenues from the activation of telephone services (as well as the related costs) are deferred over the expected duration of the relationship with the customer (in Italy, generally 8 years for retail customers and 3 years for wholesale customers). In particular, costs from the activation of telephone services are deferred taking also into account the reasonable expectations of cash flows arising from these services. To determine the expected duration of the relationship with customers we perform an analysis of our historical customer relationship trends.

Revenues from prepaid customers are accounted for on the basis of the traffic used. Deferred revenues for unused traffic are recorded in Trade and miscellaneous payables and other current liabilities in the consolidated statement of financial position.

**Table of Contents****Item 5. Operating And Financial Review And Prospects****Critical Accounting Policies And Estimates**· *Revenues from sales and bundled offerings*

Revenues from sales (telephone and other equipment) are recognized when the significant risks and rewards of ownership are transferred to the buyer.

For offerings which include the sale of mobile handsets and service contracts, we recognize revenues related to the sale of the handset when it is delivered to the final customer whereas traffic revenues are recorded on the basis of the traffic used; the related subscriber acquisition costs, including sales commissions, are expensed as incurred. The revenues allocated to the handset sale are limited to the contract amount that is not contingent upon the rendering of telecommunication services, i.e. the residual of the amount paid by the customer exceeding the services value. The determination of fair values in the telecommunications business is complex, because some of the components are price-sensitive and, thus, volatile in a competitive marketplace.

A small portion of our bundled mobile offerings are contracts with a minimum contractual period between 12 and 36 months which include an enforced termination penalty. For these contracts, the subscriber acquisition costs are capitalized under Intangible assets with a finite useful life if the conditions for capitalization as described in the related accounting policy are met.

· *Revenues on construction contracts*

Revenues on construction contracts are recognized based on the stage of completion (percentage of completion method).

Revenue recognition is subject to estimation in respect of the expected duration of customer relationships, the estimate of relative fair values and estimates of discounts, returns and allowances. Revisions to such estimates may significantly affect our future operating results. See Note Form, Content and Other General Information of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

**Allowance for doubtful accounts**

Management maintains an allowance for doubtful accounts to account for estimated losses resulting from the inability of our customers to make required payments. Management bases its estimates on the ageing of our accounts receivable balances and our historical write-off experience with similar receivables, customer credit-worthiness and changes in our customer payment history when evaluating the adequacy of our allowance for doubtful accounts. 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

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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.

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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.

Based on the impairment test conducted as of December 31, 2016, the recoverable amount of assets exceeded the carrying amount for all Cash Generating Units.

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.

**Table of Contents****Item 5. Operating And Financial Review And Prospects****Critical Accounting Policies And Estimates****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

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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.

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**5.2 RESULTS OF OPERATIONS FOR THE THREE YEARS ENDED DECEMBER 31, 2017**

**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 2017, the Italian telecommunications market has returned to moderate growth, after years of steady decline, however, the competitive pressures continue to be very significant.

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 2018-2020 Strategic Plan provides for the digitalization of all processes to dramatically enhance the digital experience for best-in-class customer engagement and to create an effective digital journey. Customer experience is expected to be improved by offering one single and intuitive interface that will allow for more customized, multi-channel interaction, thanks to a renewed IT architecture. The above implies a fully digital model of relationship with the client, based on the use of Big Data and advanced analytics to sustain the customer base and capture new growth opportunities, contributing to the consolidation of TIM's leadership in the Fixed and Mobile segments.

The objective over the Plan's time span is to significantly increase digital engagement with customers.

The customer offer, based on TIM's network leadership (fiber, 4.5G and 5G early adoption in 2020), focuses on greater convergence.

The Plan, focusing on digital innovation as a key element for a leadership positioning in the Gigabit Society, is aimed at:

- creating best in class customer engagement through a digital and agile customer journey redesign;
- supporting leadership positioning by sustaining premium customer base and capturing new growth opportunities in and outside the core business;
- accelerating cash flow generation to strengthen capital structure and increase shareholder return, and
- implementing a new agile organization and performance-based and data driven culture.

*Brazil Business Unit*

In the year 2017 the Gross Domestic Product (GDP) of Brazilian economy grew by 1.00% after two consecutive years of decline, driven mainly by increased domestic consumption and a trade balance surplus.

Inflation, measured by the Extended National Consumer Price Index (Índice de Preços ao Consumidor Amplo - IPCA), was under strict control and, by the end of 2017, it was at 2.95%, below the minimum target set by the Central Bank. The performance is explained by the super harvests, which reduced the prices of food, and also by a reduction in beverage prices. The basic interest rate (SELIC) continued its downward path and closed the year at a historically low rate of 7.00%, a significant reduction of 6.75 percentage points compared to the end of 2016. This movement is explained in part by the slight economic recovery and the expectation of lower inflation.

**5.2.2 BUSINESS SEGMENTS**

The TIM Group reports its financial results on the basis of the following operating segments:

**Domestic:** includes Italian voice and data operations on fixed and mobile networks for final customers (retail) and other operators (wholesale), the operations of the Telecom Italia Sparkle group (International wholesale), that operates internationally (in Europe, in the Mediterranean and in South America) in the development of fiber optic networks for wholesale customers, the operations of Olivetti (products and services for Information



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Technology), as well as INWIT S.p.A. (a company operating in the electronic communications infrastructure business, specifically relating to infrastructure for housing radio transmission equipment for mobile telephone networks, both for TIM and other operators) and the units supporting the Domestic sector.

**Brazil:** includes mobile (TIM Celular) and fixed (TIM Celular and TIM S.A. formerly Intelig Telecomunicações) telecommunications operations in Brazil;

**Other Operations:** includes finance companies and other minor companies not strictly related to the core business of the TIM Group.

In 2017, there were no significant changes in the scope of consolidation of the TIM Group.

The principal changes in the scope of consolidation in 2016 are as follows:

- **TIMVISION S.r.l. Business Unit Domestic:** established on December 28, 2016;
- **Noverca S.r.l. Business Unit Domestic:** TIM S.p.A. acquired 100% of the company on October 28, 2016;
- **Flash Fiber S.r.l. Domestic Business Unit:** established on July 28, 2016;
- **Sofora Telecom Argentina group:** classified under Discontinued operations (discontinued operations/non-current assets held for sale) was sold on March 8, 2016;
- **Revi Immobili S.r.l., Gestione Due S.r.l. and Gestione Immobili S.r.l. Domestic Business Unit:** on January 11, 2016, INWIT S.p.A. acquired 100% of the companies, subsequently merged by incorporation, which therefore entered the Group's consolidation scope.

These changes did not have a significant impact on the Consolidated Financial Statements of the TIM Group at and for the year ended December 31, 2016.

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.

**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.

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Management believes that 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 calculated as follows:

	<b>As of December 31,</b>				
	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>
	<b>(millions of euros)</b>				
Non-current financial liabilities	28,108	30,469	30,518	32,325	31,084
Current financial liabilities	4,756	4,056	6,224	4,686	6,119
Financial liabilities directly associated with Discontinued operations/Non-current assets held for sale			348	43	27
<b>Gross financial debt (A)</b>	<b>32,864</b>	<b>34,525</b>	<b>37,090</b>	<b>37,054</b>	<b>37,230</b>
<b>Non-current financial assets (B)</b>	<b>(1,768)</b>	<b>(2,698)</b>	<b>(2,989)</b>	<b>(2,445)</b>	<b>(1,256)</b>
<b>Current financial assets:</b>					
Securities other than investments	(993)	(1,519)	(1,488)	(1,300)	(1,348)
Financial receivables and other current financial assets	(437)	(389)	(352)	(311)	(283)
Cash and cash equivalents	(3,575)	(3,964)	(3,559)	(4,812)	(5,744)
<b>Total current financial assets (C)</b>	<b>(5,005)</b>	<b>(5,872)</b>	<b>(5,399)</b>	<b>(6,423)</b>	<b>(7,375)</b>
<b>Financial assets relating to Discontinued operations/Non-current assets held for sale (D)</b>			<b>(227)</b>	<b>(165)</b>	<b>(657)</b>
<b>Financial assets (E=B+C+D)</b>	<b>(6,773)</b>	<b>(8,570)</b>	<b>(8,615)</b>	<b>(9,033)</b>	<b>(9,288)</b>
<b>Net financial debt (A+E)</b>	<b>26,091</b>	<b>25,955</b>	<b>28,475</b>	<b>28,021</b>	<b>27,942</b>

**5.2.4 OVERVIEW OF 2017 RESULTS OF OPERATIONS**

The following characterized the 2017 results in the Italian (domestic) market in in our Brazil Business Unit:

**Domestic.** The Domestic market set a positive performance compared to last year both on total and service revenues. This result reflects the positive commercial performance due to a wide range of innovative products enabling higher value added services, the increase of fiber coverage and also a significant cost program

optimization.

**Brazil.** In the Brazilian market, 2017 results confirmed the recovery trajectory that began in 2016. This recovery was driven by a transformation of the customer base, a strong increase in the value proposition, greater incentive to recurrent offers, the construction of the largest and best 4G network in Brazil and an efficiency-oriented approach to all activities.

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The following table sets forth our consolidated income statement for the years ended December 31, 2017, 2016 and 2015.

	<b>Year ended December 31,</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
	(*)	(*)	(*)
	(millions of euros)		
Revenues	19,828	19,025	19,719
Other income	523	311	287
<b>Total operating revenues and other income</b>	<b>20,351</b>	<b>19,336</b>	<b>20,006</b>
Acquisition of goods and services	(8,388)	(7,793)	(8,532)
Employee benefits expenses	(3,626)	(3,106)	(3,589)
Other operating expenses	(1,208)	(1,083)	(1,491)
Change in inventories	35	9	(44)
Internally generated assets	626	639	656
Depreciation and amortization	(4,473)	(4,291)	(4,135)
Gains (losses) on disposals of non-current assets	11	14	336
Impairment reversals (losses) on non-current assets	(37)	(3)	(244)
<b>Operating profit (loss)</b>	<b>3,291</b>	<b>3,722</b>	<b>2,963</b>
Share of profits (losses) of associates and joint ventures accounted for using the equity method	(1)	(23)	1
Other income (expenses) from investments	(18)	7	10
Finance income	1,808	2,543	2,760
Finance expenses	(3,303)	(3,450)	(5,281)
<b>Profit (loss) before tax from continuing operations</b>	<b>1,777</b>	<b>2,799</b>	<b>453</b>
Income tax expense	(490)	(880)	(403)
<b>Profit (loss) from continuing operations</b>	<b>1,287</b>	<b>1,919</b>	<b>50</b>
Profit (loss) from Discontinued operations/Non-current assets held for sale	0	47	611
<b>Profit (loss) for the year</b>	<b>1,287</b>	<b>1,966</b>	<b>661</b>
<b>Attributable to:</b>			
Owners of the Parent	1,121	1,808	(70)
Non-controlling interests	166	158	731

(\*)

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.

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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	Media Operations	Other Adjustments and eliminations	Consolidated Total
(millions of euros, except number of employees)						
Revenues (1)	2017	15,354	4,502		(28)	19,828
	2016	15,006	4,047		11 (39)	19,025
	2015	15,001	4,637	82	49 (50)	19,719
Operating profit (loss)	2017	2,772	535		(16)	3,291
	2016	3,376	368		(18) (4)	3,722
	2015	2,359	638	14	(52) 4	2,963
Capital expenditures on an accrual basis	2017	4,551	1,150			5,701
	2016	3,709	1,167			4,876
	2015	3,900	1,289	8		5,197
Number of employees at year-end (2)	2017	49,851	9,508		70	59,429
	2016	51,280	9,849		100	61,229
	2015	52,644	13,042	64	117	65,867

(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, 2017 compared With Year Ended December 31, 2016**v **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,				Changes	
	2017		2016		(a-b)	%
	Revenues <sup>(1)</sup>	% of Consolidated revenues	Revenues <sup>(1)</sup>	% of Consolidated revenues		
	(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 <sup>(2)</sup>	0	0.0	11	0.1	(11)	
Adjustments and eliminations	(28)	(0.1)	(39)	(0.3)	11	
<b>Total Revenues</b>	<b>19,828</b>	<b>100.0</b>	<b>19,025</b>	<b>100.0</b>	<b>803</b>	<b>4.2</b>



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- (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.

**v OTHER INCOME**

The following table sets forth other income for the years ended December 31, 2017 and 2016:

	<b>Year ended December 31,</b>			
	<b>2017</b>	<b>2016</b>	<b>Changes</b>	
	<b>(a)</b>	<b>(b)</b>	<b>(a-b)</b>	<b>%</b>
	<b>(millions of euros, except percentages)</b>			
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
Damage compensation, penalties and sundry recoveries	35	24	11	45.8
Partnership agreements	116	71	45	63.4
Release of provisions and other payable items, other income	240	87	153	175.9
<b>Total other income</b>	<b>523</b>	<b>311</b>	<b>212</b>	<b>68.2</b>

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.

**v 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 (a)	2016 (b)	Changes (a-b)	%
	<b>(millions of euros, except percentages)</b>			
Acquisition of goods	1,863	1,614	249	15.4
Revenues due to other operators and interconnection costs	2,063	2,000	63	3.2
Commercial and advertising costs	1,386	1,231	155	12.6
Power, maintenance and outsourced services	1,222	1,220	2	0.2
Rent and leases	739	702	37	5.3
Other service expenses	1,115	1,026	89	8.7
<b>Total acquisition of goods and services</b>	<b>8,388</b>	<b>7,793</b>	<b>595</b>	<b>7.6</b>
<i>% on Revenues</i>	<i>42.3</i>	<i>41.0</i>		

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

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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 (a)	2016 (b)	Changes (a-b)	%
<b>(millions of euros, except percentages)</b>				
<b>Employee benefits expenses Italian companies:</b>				
Ordinary employee expenses and costs	2,551	2,600	(49)	(1.9)
Corporate restructuring expenses	697	144	553	n.s.
<b>Total employee benefits expenses Italy</b>	<b>3,248</b>	<b>2,744</b>	<b>504</b>	<b>18.4</b>
<b>Employee benefits expenses Outside Italy</b>				
Ordinary employee expenses and costs	378	347	31	8.9
Corporate restructuring expenses		15	(15)	
<b>Total employee benefits expenses Outside Italy</b>	<b>378</b>	<b>362</b>	<b>16</b>	<b>4.4</b>
<b>Employee benefits expenses</b>	<b>3,626</b>	<b>3,106</b>	<b>520</b>	<b>16.7</b>
<i>% on Revenues</i>	<i>18.3</i>	<i>16.3</i>		

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.

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The Group's average salaried workforce for the periods indicated was as follows:

	Year ended December 31,			
	2017 (a)	2016 (b)	Changes (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)
<b>Total average salaried workforce(1)</b>	<b>54,946</b>	<b>57,855</b>	<b>(2,909)</b>	<b>(5.0)</b>
Non-current assets held for sale (Sofora-Telecom Argentina group)		2,581	(2,581)	(100.0)
<b>Total Average salaried workforce including Non-current assets held for sale(1)</b>	<b>54,946</b>	<b>60,436</b>	<b>(5,490)</b>	<b>(9.1)</b>

(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 (a)	2016 (b)	Changes (a-b)	%
	(units, except percentages)			
Employees Italy	49,689	51,125	(1,436)	(2.8)
Employees Foreign	9,740	10,104	(364)	(3.6)
<b>Total Employees(1)</b>	<b>59,429</b>	<b>61,229</b>	<b>(1,800)</b>	<b>(2.9)</b>
<b>Total Employees including Non-current assets held for sale(1)</b>	<b>59,429</b>	<b>61,229</b>	<b>(1,800)</b>	<b>(2.9)</b>

(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 (a)	2016 (b)	Changes (a-b) %	
	(millions of euros, except percentages)			
Writedowns and expenses in connection with credit management	400	335	65	19.4
Provision charges	228	144	84	58.3
TLC operating fees and charges	356	373	(17)	(4.6)
Indirect duties and taxes	111	100	11	11.0
Penalties, compensation and administrative fines	33	44	(11)	(25.0)
Association dues and fees, donations, scholarships and traineeships	15	18	(3)	(17)
Sundry expenses	65	69	(4)	(5.8)
<b>Total other operating expenses</b>	<b>1,208</b>	<b>1,083</b>	<b>125</b>	<b>11.5</b>
<i>% on Revenues</i>	<i>6.1</i>	<i>5.7</i>		

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

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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 (a)	2016 (b)	Changes (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
<b>Total depreciation and amortization</b>	<b>4,473</b>	<b>4,291</b>	<b>182</b>	<b>4.2</b>
<i>% on Revenues</i>	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.

v **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.



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In detail:

	<b>Year ended December 31, 2017      2016 (millions of euros)</b>	
<b>Acquisition of goods and services and Change in inventories</b>		
Expenses related to agreements and the development of non-recurring projects	10	2
<b>Employee benefits expenses(*)</b>		
Expenses related to restructuring and rationalization and other expenses	697	160
<b>Sundry expenses and provisions</b>		
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	
<b>Impact on Operating profit</b>	<b>913</b>	<b>185</b>

(\*) 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.

v **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 2016 write-down of the investment held in Alfiere S.p.A..

v **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 2016 was primarily due to dividends distributed by Emittenti Titoli to TIM S.p.A.

v **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.

**Table of Contents****Item 5. Operating And Financial Review And Prospects Results Of Operations For The Three Years Ended December 31, 20****v 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.

**5.2.7 RESULTS OF OPERATIONS OF BUSINESS UNITS FOR THE YEAR ENDED DECEMBER 31, 2017 COMPARED WITH THE YEAR ENDED DECEMBER 31, 2016****v 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 (a)	2016 (b)	Changes (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.

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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 (a)	2016 (b)	Changes (a-b)	%
	(millions of euros, except percentages and employees)			
Revenues	14,249	13,926	323	2.3
<i>Consumer</i>	7,737	7,389	348	4.7
<i>Business</i>	4,656	4,531	125	2.8
<i>Wholesale</i>	1,690	1,780	(90)	(5.1)
<i>Other</i>	166	226	(60)	(26.5)
Operating profit (loss)	2,736	3,309	(573)	(17.3)
<i>% of Revenues</i>	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 unit 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 a positive impact on revenues for 2016. Growth of 88 million euros in revenues from access and ultrabroadband services in 2017 more than offset the cut in regulated prices of 72 million euros.

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	Year ended December 31,			
	2017 (a)	2016 (b)	Changes (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	16	1.4
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 unit 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 by 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 (a)	2016 (b)	Changes (a-b)	%

	<b>(millions of euros, except percentages)</b>			
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



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In detail:

- **acquisition of goods and services** increased by 450 million euros compared to 2016. In detail:

	Year ended December 31,			
	2017 (a)	2016 (b)	Changes %	
	(millions of euros, except percentages)			
Acquisition of goods	1,628	1,352	276	20.4
Revenues due to other TLC operators and interconnection costs	1,603	1,541	62	4.0
Commercial and advertising costs	751	656	95	14.5
Power, maintenance and outsourced services	951	982	(31)	(3.2)
Rent and leases	427	444	(17)	(3.8)
Other service expenses	875	810	65	8.0
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 (a)	2016 (b)	Changes (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	2
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)	(18.8)
Sundry expenses	44	49	(5)	(10)
<b>Total</b>	<b>704</b>	<b>574</b>	<b>130</b>	<b>22.6</b>

- **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.

### v 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
<i>% of Revenues</i>	<i>11.9</i>	<i>9.1</i>	<i>11.9</i>	<i>9.1</i>		
Employees at year-end (units)	9,508	9,849	9,508	9,849	(341)	(3.5)

**Table of Contents****Item 5. Operating And Financial Review And Prospects Results Of Operations For The Three Years Ended December 31, 20****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.

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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 .

**5.2.8 YEAR ENDED DECEMBER 31, 2016 COMPARED WITH YEAR ENDED DECEMBER 31, 2015****v REVENUES**

**Revenues** declined by 694 million euros, or 3.5%, from 19,719 million euros in 2015 to 19,025 million euros in 2016. The decrease of 694 million euros was mainly attributable to the Brazil Business Unit (590 million euros).

The table below sets forth for the periods indicated gross revenues by Business Unit and consolidated revenues.

	2016		Year ended December 31, 2015		Changes	
	Revenues(1) (a)	% of Consolidated revenues (b)	Revenues(1) (b)	% of Consolidated revenues	(a-b)	%
	(millions of euros, except percentages)					
Domestic(2)	15,006	78.9	15,001	76.1	5	0.0
Core Domestic(3)	13,926	73.2	14,001	71.0	(75)	(0.5)
International Wholesale	1,351	7.1	1,314	6.7	37	2.8
Brazil	4,047	21.3	4,637	23.5	(590)	(12.7)
Other Operations(4)	11	0.1	131	0.7	(120)	(91.6)
Adjustments and eliminations	(39)	(0.3)	(50)	(0.3)	11	(22.0)
<b>Total Revenues</b>	<b>19,025</b>	<b>100.0</b>	<b>19,719</b>	<b>100.0</b>	<b>(694)</b>	<b>(3.5)</b>

(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) 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; without that change, the revenues of the Domestic Business Unit for the year 2016 would have totaled 14,933 million euros.
- (3) From January 1, 2016, this also includes the company Olivetti. Figures for the period under comparison have been changed accordingly.
- (4) 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.

#### v OTHER INCOME

The following table sets forth other income for the years ended December 31, 2016 and 2015:

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (a-b)	%
	(millions of euros, except percentages)			
Late payment fees charged for telephone services	60	59	1	1.7
Recovery of employee benefit expenses, purchases and services rendered	33	32	1	3.1
Capital and operating grants	36	33	3	9.1
Damage compensation, penalties and sundry recoveries	24	25	(1)	(4.0)
Partnership agreements	71		71	
Release of provisions and other payable items, other income	87	138	(51)	(37.0)
<b>Total other income</b>	<b>311</b>	<b>287</b>	<b>24</b>	<b>8.4</b>

Total other income increased by 24 million euros relative to 2015 (+8.4%).

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Operating expenses declined by 1,429 million euros, or 8.4% from 17,043 million euros in 2015 to 15,614 million euros in 2016.

The components of our operating expenses include the following:

- **Acquisition of goods and services** declined by 739 million euros, or 8.7% from 8,532 million euros in 2015 to 7,793 million euros in 2016. The decline was mainly due to the Brazil Business Unit, which experienced a decline in acquisition of goods and services costs of 415 million euros (including a negative exchange rate effect of 103 million euros). Acquisition of goods and services for the Domestic Business Unit showed a reduction of 261 million euros, mainly due to lower costs of consulting and professional services, and lower advertising and promotion expenses.

The following table sets forth the acquisition of goods and services for the years ended December 31, 2016 and 2015:

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (a-b)	%
	(millions of euros, except percentages)			
Purchase of goods	1,614	1,811	(197)	(10.9)
Portion of revenues to be paid to other operators and interconnection costs	2,000	2,080	(80)	(3.8)
Commercial and advertising costs	1,231	1,398	(167)	(11.9)
Power, maintenance and outsourced services	1,220	1,272	(52)	(4.1)
Rent and leases	702	699	3	0.4
Other service expenses	1,026	1,272	(246)	(19.3)
<b>Total acquisition of goods and services</b>	<b>7,793</b>	<b>8,532</b>	<b>(739)</b>	<b>(8.7)</b>
<i>% on Revenues</i>	<i>41.0</i>	<i>43.3</i>		

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, 2016 and 2015:

**Year ended December 31,**

	2016 (a)	2015 (b)	Changes (a-b) %	
	(millions of euros, except percentages)			
<b>Employee benefits expenses Italian companies:</b>				
Ordinary employee expenses and costs	2,600	2,769	(169)	(6.1)
Corporate restructuring expenses	144	446	(302)	n.s.
<b>Total employee benefits expenses Italy</b>	<b>2,744</b>	<b>3,215</b>	<b>(471)</b>	<b>(14.7)</b>
<b>Employee benefits expenses Outside Italy</b>				
Ordinary employee expenses and costs	347	374	(27)	(7.2)
Corporate restructuring expenses	15	0	15	n.s.
<b>Total employee benefits expenses Outside Italy</b>	<b>362</b>	<b>374</b>	<b>(12.0)</b>	<b>(3.2)</b>
<b>Total employee benefits expenses</b>	<b>3,106</b>	<b>3,589</b>	<b>(483)</b>	<b>(13.5)</b>
<i>% on Revenues</i>	<i>16.3</i>	<i>18.2</i>		

Employee benefits expenses declined by 483 million euros, or 13.5%, from 3,589 million euros in 2015 to 3,106 million euros in 2016.



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The change was due to:

- a decrease of 169 million euros in the Italian component of ordinary employee expenses. The average salaried workforce decreased by 2,195 average employees, with a decrease of 1,702 average employees related to the application of Solidarity Contracts . In addition, the earnings for 2016 benefited in particular from the reversal of the provision, made in the 2015 financial statements for 66 million euros, following the failure to achieve the conditions for payment of the Results Bonus to employees. The amount reversed for the Parent alone was 58 million euros;
- the recognition of expenses (provisions to Employee benefits and sundry expenses) from domestic companies totaling 144 million euros. In particular, the Parent recognized overall expenses of 94 million euros, of which 75 million euros relate to the start of the managerial restructuring plan linked to the ongoing revision of the organizational structures (Agreements of June 19, 2015 and July 25, 2016) consisting of the application to management staff of Article 4, paragraphs 1-7ter, of Italian Law No. 92 of June 28, 2012, the Fornero Law (33 million euros) and forms of compensation related to the termination of the employment relationship (42 million euros). Furthermore, the Parent Company also set aside a further 17 million euros following the updating of forecast on non-managerial personnel exit in application of art. 4 paragraphs 1-7ter, of Law no. 92 of June 28, 2012, ( Fornero Law ) as per the Agreement of October 27, 2015. In addition, Telecom Italia Information Technology (subsequently merged into TIM S.p.A), TI Sparkle, HR Services and Olivetti have allocated provisions totaling 50 million euros, essentially connected to the application of Article 4 of the Fornero Law for non-managerial and managerial personnel and the commencement by Telecom Italia Information Technology and TI Sparkle of a managerial restructuring plan similar to the one adopted by the Parent.

In 2015, provisions totaled 446 million euros (422 million euros by the Parent, 17 million euros by Olivetti, 3 million euros by Telecom Italia Information Technology, 2 million euros by HR Services and 2 million euros by Telecom Italia Sparkle). More details are provided in the Note Employee benefits expenses of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report; and

- a decrease of 12 million euros in the component outside Italy of employee benefits expenses, including a negative currency effect of around 15 million euros net of which the change would have been positive for 3 million euros. This effect was essentially related to the recognition of expenses from the implementation of the corporate restructuring plan initiated by the Brazil Business Unit (14 million euros), which was offset by the effects of the decrease in the average salaried workforce (1,503 average employees).

The Group's average salaried workforce for the periods indicated was as follows:

<b>Year ended December 31,</b>			
<b>2016</b>	<b>2015</b>	<b>Changes</b>	
<b>(a)</b>	<b>(b)</b>	<b>(a-b)</b>	<b>%</b>

**(full time equivalent units, except percentages)**

Average salaried workforce Italy	47,166	49,361	(2,195)	(4.4)
Average salaried workforce Foreign	10,689	12,192	(1,503)	(12.3)
<b>Total average salaried workforce(1)</b>	<b>57,855</b>	<b>61,553</b>	<b>(3,698)</b>	<b>(6.0)</b>
Non-current assets held for sale (Sofora Telecom Argentina group)	2,581	15,465	(12,884)	(83.3)
<b>Total Average salaried workforce including Non-current assets held for sale(1)</b>	<b>60,436</b>	<b>77,018</b>	<b>(16,582)</b>	<b>(21.5)</b>

(1) Includes the average employees with temporary work contracts: 4 units in 2016 (3 in Italy and 1 outside Italy). In 2015 average employees with temporary work contracts were 3 units (2 in Italy and 1 outside Italy).

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The Group's employees at December 31, 2016 and 2015 were as follows:

	As of December 31,			
	2016 (a)	2015 (b)	Changes (a-b)	%
	(units, except percentages)			
Employees Italy	51,125	52,555	(1,430)	(2.7)
Employees Foreign	10,104	13,312	(3,208)	(24.1)
<b>Total Employees(1)</b>	<b>61,229</b>	<b>65,867</b>	<b>(4,638)</b>	<b>(7.0)</b>
Non-current assets held for sale (Sofora Telecom Argentina group)		16,228	(16,228)	(100.0)
<b>Total Employees including Non-current assets held for sale(1)</b>	<b>61,229</b>	<b>82,095</b>	<b>(20,866)</b>	<b>(25.4)</b>

(1) Includes employees with temporary work contracts: 4 units at December 31, 2016 and 3 units at December 31, 2015.

· **Other operating expenses**

The following table sets forth other operating expenses for the years ended December 31, 2016 and 2015.

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (a-b)	%
	(millions of euros, except percentages)			
Writedowns and expenses in connection with credit management	335	345	(10)	(2.9)
Provision charges	144	330	(186)	(56.4)
Indirect duties and taxes	100	116	(16)	(13.8)
TLC operating fees	373	342	31	9.1
Penalties, compensation and administrative sanctions	44	292	(248)	(84.9)
Association dues and fees, donations, scholarships and traineeships	18	18		
Sundry expenses	69	48	21	43.8
<b>Total other operating expenses</b>	<b>1,083</b>	<b>1,491</b>	<b>(408)</b>	<b>(27.4)</b>
<i>% on Revenues</i>	5.7	7.6		

Other operating expenses decreased by 408 million euros, or 27.4%, from 1,491 million euros in 2015 to 1,083 million euros in 2016. The decrease was largely attributable to the Domestic Business Unit, which showed a reduction of 425 million euros, partly offset by a 35 million euro increase in the Brazil Business Unit, which was affected by higher contribution fees and subscription charges for the conduct of telecommunication activities.

#### · Depreciation and Amortization

The following table sets forth depreciation and amortization for the years ended December 31, 2016 and 2015.

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (a-b)	%
	<b>(millions of euros, except percentages)</b>			
Amortization of intangible assets with a finite useful life	1,743	1,788	(45)	(2.5)
Depreciation of tangible assets owned and leased	2,548	2,347	201	8.6
<b>Total depreciation and amortization</b>	<b>4,291</b>	<b>4,135</b>	<b>156</b>	<b>3.8</b>
<i>% on Revenues</i>	22.6	21.0		

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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 2016, Gains (losses) on disposals of non-current assets were 14 million euros and included the gain realized by the Brazil Business Unit of 44 million reais (approximately 12 million euros at the 2016 average exchange rate) following the conclusion of the sale of two additional tranches of telecommunications towers to American Tower do Brasil.

In 2015, this item amounted to 336 million euros and was mainly attributable to the gain of 1,211 million reais (approximately 328 million euros) realized by the Brazil Business Unit from the sale of the first three tranches of telecommunications towers to American Tower do Brasil.

For further details, please see 5.2.7 Results of Operations of Business Units for the Year Ended December 31, 2016 Compared with the Year Ended December 31, 2015- Brazil included elsewhere in this Annual Report.

· **Net impairment losses on non-current assets**

Net impairment losses on non-current assets declined by 241 million euros from 244 million euros in 2015 to 3 million euros in 2016 and reflect the restatement of the value of some minor assets.

In preparing the 2016 Consolidated Financial Statements, the TIM Group carried out an impairment test on the goodwill. The results of that testing, carried out in accordance with the specific procedure adopted by the Group, confirmed the amounts of Goodwill allocated to the Group's individual Cash Generating Units.

In 2015 there was an impairment loss in the Brazil Business Unit of 240 million euros and other items for 4 million euros.

For further details please see Note-Goodwill of the Notes to the Consolidated Financial Statements, included elsewhere herein.

v **OPERATING PROFIT (LOSS)**

**Operating profit** increased by 759 million euros, or 25.6%, from 2,963 million euros in 2015 to 3,722 million euros in 2016, with an operating profit margin of 19.6%, an increase of 4.6 percentage points relative to 2015 (15.0%), as a result of the difference between revenues and other (operating) income and operating expenses described above

In particular, in 2016 and 2015, 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:

(millions of euros)	2016	2015
<b>Acquisition of goods and services and Change in inventories</b>		
Expenses related to agreements and development of specific projects	2	112
<b>Employee benefits expenses</b>		
Expenses related to restructuring and rationalization	159	446
<b>Sundry expenses and provisions</b>		
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	36	518
Gain from Brazil Towers disposal	(12)	(328)
Brazil goodwill impairment loss		240
Impairment losses on tangible assets		2
<b>Impact on Operating profit</b>	<b>185</b>	<b>990</b>

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**v SHARE OF PROFITS (LOSSES) OF ASSOCIATES AND JOINT VENTURES ACCOUNTED FOR USING THE EQUITY METHOD**

Share of losses of associates and joint ventures accounted for using the equity method decreased by 24 million euros, from a 1 million euro profit in 2015 to a 23 million euro loss in 2016, mainly as a result of the loss of the investment in Alfiere S.p.A.

**v OTHER INCOME (EXPENSES) FROM INVESTMENTS**

In 2016, other income from investments was 7 million euros, including mainly dividends distributed by Emittenti Titoli to TIM S.p.A. In 2015, other income from investments was 10 million euros and was mainly related to the gain from the sale of the non-controlling interest in SIA S.p.A., which took place on July 10, 2015.

**v FINANCE INCOME (EXPENSES)**

Finance income (expenses) decreased by 1,614 million euros, from 2,521 million euros in 2015 to 907 million euros in 2016. The balance recorded in 2016 was affected by:

- the positive impact of 565 million euros (a 454 million euros expense in 2015) 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 ( Guaranteed Subordinated Mandatory Convertible Bonds due 2016 convertible into ordinary shares of TIM S.p.A. );
- the effects of the changes in several non-monetary items, of a valuation and accounting nature, linked in particular to derivatives;
- the positive impact of the bond buybacks carried out in the previous year, which had generated a negative effect of 379 million euros in 2015, resulting from the buyback price net of the benefits from the consequent termination of several hedging derivatives associated with the securities bought back; and
- lower finance expenses due to the reduction in the Group's debt exposure and in interest rates.

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.

**v INCOME TAX EXPENSE**

Income tax expense increased by 477 million euros, from 403 million euros in 2015 to 880 million euros in 2016, mainly related to the higher taxable base of the Parent TIM.

v **PROFIT (LOSS) FROM DISCONTINUED OPERATIONS/NON-CURRENT ASSETS HELD FOR SALE**

In 2016, profit from discontinued operations/non-current assets held for sale was 47 million euros (611 million euros in 2015), and was related to:

- the positive contribution of 59 million euros to consolidated earnings from the Sofora Telecom Argentina group for the period January 1 to March 8; and
  - the negative impact from the sale of the equity interest and relative income taxes totaling 12 million euros.
- For further details, please see Note Discontinued operations/Non-current assets held for sale , of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.



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The following table sets forth, certain financial and other data for the Domestic Business Unit for the years ended December 31, 2016 and 2015.

	<b>Year ended December 31,</b>			
	<b>2016</b>	<b>2015</b>	<b>Changes</b>	
	<b>(a)</b>	<b>(b)</b>	<b>(a-b)</b>	<b>%</b>
	<b>(millions of euros, except percentages and employees)</b>			
Revenues	15,006	15,001	5	0.0
Operating profit (loss)	3,376	2,359	1,017	43.1
% of Revenues	22.5	15.7		
Employees at year-end (units)	51,280	52,644	(1,364)	(2.6)

The Media Business Unit was incorporated into the Domestic Business Unit as of January 1, 2016. One of the key strategic drivers for growth identified in the Previous Industrial Plan (confirmed in the 2017-2019 Industrial Plan) was the development of quadruple Play convergent services through the offer of a broad range of diversified video content, realized both in partnership with key content providers and through TIM Vision, the Group's own platform of services. Within this framework, Persidera plays an important role in supporting the development of TIM Vision services, building on its distinctive Head End expertise (management and distribution of TV signals via cable platform) and Play Out experience (television program broadcasting operations). Other key synergies to help guarantee the medium-term stability/growth of revenues from bandwidth rental for Persidera come from the development of strategic partnerships between TIM and content providers that do not have proprietary broadcasting channels (multiplexes) for free-to-air television broadcasting and which instead pursue a multi-platform distribution strategy.

The framework of the 2017-2019 Industrial Plan and the new governance structure of Persidera are consistent with this future scenario, based on the increasingly closer link between the TLC industry and Media/Content providers to underpin the growth of ultrabroadband services in the Consumer segment.

Following the change in scope, the table below shows the performance of the Domestic Business Unit in 2016, reported on a like-for-like basis with the previous year, thus excluding the contribution of the Media Business Unit:

	<b>Year ended December 31,</b>			
	<b>2016</b>	<b>2015</b>	<b>Changes</b>	
	<b>(a)</b>	<b>(b)</b>	<b>(a-b)</b>	<b>%</b>

**(millions of euros, except percentages and employees)**

Revenues	14,933	15,001	(68)	(0.5)
Operating profit (loss)	3,357	2,359	998	42.3
% of Revenues	22.5	15.7		6.8
Employees at year-end (units)	51,218	52,644	(1,426)	(2.7)

**Revenues**

Revenues increased slightly by 5 million euros from 15,001 million euros in 2015 to 15,006 million euros in 2016, due to the structural improvement recorded during the year, which resulted in a turnaround in the third and fourth quarters with a positive growth rate compared to the same periods of the previous year. Revenues in the third and fourth quarter of 2016 grew by 1.0% and 2.5%, respectively, relative to the third and fourth quarter of 2015, respectively. On the other hand, revenues in the first and second quarter of 2016 declined by 2.3% and 1.2%, respectively, as compared to the first and second quarter of 2015.

Revenues from services in 2016 declined by 180 million euros, or 1.3% compared to 2015, less than the decrease recorded in 2015 (-276 million euros, or 1.9% compared to 2014). Growth in the Mobile segment was strong with revenue growing in each quarter, relative to 2015. In the fourth quarter of 2016, the decline in revenues from services amounted to 1.3%, which was due to the reduction of regulated wholesale prices.

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In more detail:

- revenues from services in the Mobile business increased by 63 million euros, or 1.4%, from 4,516 million euros in 2015 to 4,579 million euros in 2016. This growth was a continuation of the steady growth experienced in each of quarter of 2015: 3.0% in the fourth quarter, 1.1% in the third quarter, 0.7% in the second quarter and 0.6% in the first quarter of 2015. The fourth quarter of 2015 was particularly impacted by the launch of innovative offers during the fall campaign, further impetus to the spread of 4G coverage and services and optimal pricing strategy, aimed at responding to commercial pressures on the low-spending segment and ensuring quality and convergence in the medium-high spending segment. This improvement was also evidenced by the strong recovery of the main operational indicators: in the fourth quarter of 2016, ARPU increased to 13.3 euro/month, compared to 12.8 euro/month in the fourth quarter of 2015, the churn stood at 23%, confirming it as best-in-class in the field, while the Mobile Number Portability balance improved, to a gain of 26 thousand in the fourth quarter of 2016, relative to a loss of 44 thousand in the third quarter of 2016;

- revenues from Fixed-line services declined by 407 million euros, or 3.9%, from 10,372 million euros in 2015 to 9,965 million euros in 2016. The decline was driven by the decline in revenues from voice services, which was marked by a 533 million euro decline from loss of traditional accesses, but with a recovery trend compared to previous periods. This decline was only partially offset by continued growth in the broadband and ultrabroadband customer base, with a growth of 158 million euros, or 6.8%, in 2016 in innovative connectivity services relative to 2015. These results were also significantly affected by the reduction in regulated prices of some wholesale services. Line losses also significantly dropped and were down to 83 thousand in the last quarter of 2016, confirming the trend already observed in previous quarters. The trend of net new fiber lines sharply accelerated, with 125 thousand in the fourth quarter, with an NGN customer base of approximately 1 million.

Revenues from product sales improved significantly by 185 million euros, or 19.6%, from 943 million euros in 2015 to 1,128 million euros in 2016, due to the growth in volumes and revenues from the sale of products enabling Internet connectivity and entertainment services (smartphones, SmartTV and modems).

The following table sets forth the Domestic Business Unit's revenues by market segment for the years ended December 31, 2016 and 2015.

- Core Domestic**

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (a-b)	%
	(millions of euros, except percentages and employees)			
Revenues(1)	13,926	14,001	(75)	(0.5)
Consumer	7,389	7,271	118	1.6
Business(2)	4,535	4,745	(210)	(4.4)
Wholesale	1,780	1,827	(47)	(2.6)

<i>Other</i>	222	158	64	40.5
Operating profit (loss)	3,309	2,275	1,034	45.5
<i>% of Revenues</i>	23.8	16.2		
Employees at year-end (units) (*) (**)	50,527	51,999	(1,472)	(2.8)

(1) Following the change in the mission of Persidera, the Media Business Unit was included in the Domestic Business Unit (Core Domestic) as of January 1, 2016; without that change, Core Domestic revenues would have totaled 13,853 million euros in 2016, compared to 14,001 million euros in 2015.

(2) As result of the new organizational view, as of January 1, 2016 the Business segment also includes Olivetti. Figures for the period under comparison have been changed accordingly.

(\*) Includes employees with temporary work contracts: 1 unit in 2016, no units in 2015.

(\*\*) Without the change resulting from the aforementioned inclusion of the Media Business Unit into the Domestic Business Unit (Core Domestic), the headcount for the Core Domestic segment for the reporting period would have totaled 50,465 employees.

· Consumer: revenues for the Consumer segment increased by 118 million euros, or 1.6%, from 7,271 million euros in 2015 to 7,389 million euros in 2016. This positive result was driven by the trend of structural

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improvement in Mobile revenues, resulting from both a stable market share and the stabilization of ARPU levels, as well as by the gradual recovery of revenues in the Fixed-line segment, boosted by the significant reduction and improvement of the trend of lost accesses.

The following is noted in particular:

- revenues from the Mobile business grew by 161 million euros, or 4.5%, from 3,598 million euros in 2015 to 3,759 million euros in 2016. Revenues from services increased by 101 million euros, or 3.2%, with the positive performance continuing in the last quarter relative to the fourth quarter of 2015, due to the improvement in competition conditions, with the progressive stabilization of market share and the steady growth in Internet mobile and digital entertainment services supporting ARPU levels;
- revenues for the Fixed-line segment decreased by 125 million euros, or 3.4%, from 3,709 million euros in 2015 to 3,584 million euros in 2016. Revenues, however, showed signs of recovery in the last quarter of 2016, growing 2.0% relative to the fourth quarter of 2015. This trend of revenue improvement over the course of 2016 was attributable to a reduction in the loss of voice-only accesses, accompanied by growth in broadband and ultrabroadband customers and the growth of products enabling digital connectivity and content services (SmartTV, decoders and modems).
- Business: revenues for the Business segment decreased by 210 million euros, or 4.4%, from 4,325 million euros in 2015 to 4,535 million euros in 2016, of which 193 million euros was attributable to the services component and 18 million euros attributable to equipment and products component.

In particular:

- revenues from Mobile services declined by 45 million euros, or 4.0% relative to 2015. Specifically, the continuing decline in traditional mobile services, 12.7% in the voice and messaging component compared to 2015, was driven by the shift of customers towards bundled formulas with a lower overall ARPU level and the migration of Public Administration clients towards the new Consip offer (with lower unit prices), and was only partially offset by a 4.4% growth in new digital services relative to 2015. The fourth quarter of 2016, however, showed a reversal of the trend with significant recovery in performance growing by 2.2% as compared to the fourth quarter of 2015;
- revenues from Fixed-line services declined by 118 million euros, or 3.7% compared to the previous year, despite a 3.1% steady growth in revenues from ICT services relative to 2015, particularly for Cloud services. The segment continued to be adversely affected by the slow economic recovery, the reduction in prices on traditional voice and data services, and the technological shift towards VoIP systems.

- Wholesale: revenues for the Wholesale segment declined by 47 million euros, or 2.6%, from 1,827 million euros in 2015 to 1,780 million euros in 2016. The impact on revenues is entirely attributable to the reduction in regulated prices which had a negative impact of 46 million euros, and was partially offset by the contribution from several infrastructure capacity sales deals.

- International Wholesale Telecom Italia Sparkle group**

	Year ended December 31,			
	2016	2015	Changes	
	(a)	(b)	(a-b)	%
	(millions of euros, except percentages and employees)			
Revenues	1,351	1,314	37	2.8
Operating profit	67	85	(18)	(21.2)
<i>% of Revenues</i>	5.0	6.5		
Employees at year-end (units)(1)	753	645	108	16.7

(1) Includes employees with temporary work contracts: 3 units in 2016, 2 units in 2015.

In 2016, revenues for the Telecom Italia Sparkle group International Wholesale increased by 37 million euros, or 2.8%, from 1,314 million euros in 2015 to 1,351 million euros in 2016. The result was mainly due to an increase of 34 million euros, or 3.7%, in revenues from Voice services compared to 2015, while the performance of the other business lines was substantially stable.

Table of Contents**Item 5. Operating And Financial Review And Prospects Results Of Operations For The Three Years Ended December 31, 2016****Operating profit**

Operating profit increased by 1,017 million euros, or 43.1%, from 2,359 million euros in 2015 to 3,376 million euros in 2016, with an Operating profit margin of 22.5%, 6.8 percentage points higher than in 2015.

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,			
	2016 (a)	2015 (b)	Changes (a-b) %	
	<b>(millions of euros, except percentages)</b>			
Acquisition of goods and services	5,785	6,046	(261)	(4.3)
Employee benefits expenses	2,759	3,206	(447)	(13.9)
Other operating expenses	574	999	(425)	(42.5)
Depreciation and amortization	3,310	3,205	105	3.3

In detail:

- acquisition of goods and services** fell by 261 million euros compared to 2015. This decrease, which was achieved without reducing sales drives, was due to efficiency improvements, selection and cost-cutting measures, particularly with respect to items relating to space occupation, professional and consulting services, management of IT equipment and systems and other costs; the breakdown of the item is reported in the table below:

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (a-b) %	
Purchases of goods	1,352	1,304	48	3.7
Portion of revenues to be paid to other operators and interconnection costs	1,541	1,507	34	2.3
Commercial and advertising costs	656	743	(87)	(11.7)
Power, maintenance and outsourced services	982	1,011	(29)	(2.9)
Rent and leases	444	473	(29)	(6.1)
Other service expenses	810	1,008	(198)	(19.6)
Total acquisition of goods and services	5,785	6,046	(261)	(4.3)
% of Revenues	38.6	40.3		

- **employee benefits expenses** decreased by 447 million euros, or 13.9%, from 3,206 million euros in 2015 to 2,759 million euros in 2016, due to the same factors that affected the employee benefits expenses at Group level;



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- **other operating expenses** decreased by 425 million euros from 999 million euros in 2015 to 574 million euros in 2016, mainly due to lower provisions and costs for disputes and regulatory penalties. The breakdown of the item is reported in the table below:

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (a-b)	%
	(millions of euros, except percentages)			
Write-downs and expenses in connection with credit management	266	270	(4)	(1.5)
Provision charges	51	236	(185)	n.s.
TLC operating fees and charges	54	56	(2)	(3.6)
Indirect duties and taxes	94	100	(6)	(6.0)
Penalties, settlement compensation and administrative fines	44	292	(248)	(84.9)
Association dues and fees, donations, scholarships and traineeships	16	16		
Sundry expenses	49	29	20	69.0
<b>Total</b>	<b>574</b>	<b>999</b>	<b>(425)</b>	<b>(42.5)</b>

- **depreciation and amortization**, increased by 105 million euros, or 3.3%, from 3,205 million euros in 2015 to 3,310 million euros in 2016.

**Employees**

There were 51,280 employees as of December 31, 2016, a reduction of 1,364 employees compared to December 31, 2015.

v **BRAZIL**

The following table sets forth certain financial and other data for the Brazil Business Unit for the years ended December 31, 2016 and 2015.

	Year ended December 31,				Changes	
	2016 (a)	2015 (b)	2016 (a)	2015 (b)	(a-b)	%
	(millions of euros, except percentages and employees)		(millions of Brazilian reais, except percentages and employees)			
Revenues	4,047	4,637	15,617	17,142	(1,525)	(8.9)

Operating profit	368	638	1,418	2,358	(940)	(39.9)
<i>% of Revenues</i>	<i>9.1</i>	<i>13.8</i>	<i>9.1</i>	<i>13.8</i>		
Employees at year-end (units)	9,849	13,042	9,849	13,042	(3,193)	(24.5)

### Revenues

Revenues decreased by 1,525 million reais, or -8.9%, from 17,142 million reais in 2015 to 15,617 million reais in 2016. Service revenues decreased by 667 million reais, or 4.3%, from 15,387 million reais in 2015 to 14,720 million reais in 2016. Mobile Average Revenue Per User (ARPU) was 18.0 reais for 2016, compared to 16.7 reais in the previous year, an improvement of 7.8%.

The Business Unit's total number of lines decreased by 2.8 million, 4.3%, from 66.2 million at December 31, 2015 to 63.4 million at December 31, 2016; the market share at the end of December 2016 was 26.0%, a decline of 0.3% from 25.7% at December 31, 2015.

Revenues from product sales declined by 858 million euros, or 48.9%, from 1,755 million euros in 2015 to 897 million reais in 2016, reflecting a commercial policy less focused on the sale of handsets, in addition to the impact of the Brazilian macroeconomic crisis on household spending.

Performance over the course of 2016 improved with the decline in revenues and service revenues becoming less pronounced in each quarter. In the fourth quarter of 2016, total revenues amounted to 4,043 million reais a 1.7%

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decline compared to the fourth quarter of 2015. Quarter-on-quarter declines in revenue for 2016, relative to 2015, were 5.2% in the third quarter, 12.4% in the second quarter and 15.3% in the first quarter. In the fourth quarter service revenues amounted to 3,842 million reais a 0.7% decline compared to the fourth quarter of 2015. Quarter-on-quarter declines in service revenues in 2016, relative to 2015, were 2.4% in the third quarter, 5.9% in the second quarter and 8.3% in the first quarter, mainly driven by the steady improvement in service revenues generated by mobile customers.

**Operating profit**

Operating profit declined by 940 million reais, from 2,358 million reais in 2015 to 1,418 million reais in 2016. This result was affected by the effect of a higher depreciation and amortization of 423 million reais and the lower benefit from the sale of telecommunication towers, which in 2015 resulted in a gain of 1,211 million reais compared to a gain of 44 million reais in 2016.

	Year ended December 31,				Changes	
	2016	2015	2016	2015	(a-b)	%
	(millions of euros)		(a)	(b)	(millions of Brazilian reais, except percentages)	
Acquisition of goods and services	2,028	2,443	7,826	9,033	(1,207)	(13.4)
Employee benefits expenses	336	349	1,296	1,289	7	0.5
Other operating expenses	505	470	1,948	1,736	212	12.2
Change in inventories	(1)	33	(2)	122	(124)	
Depreciation and amortization	980	909	3,785	3,362	423	12.6

- **acquisition of goods and services** showed a significant decline of 1,207 million reais, or 13.4%, for all components compared to 2015;
- **employee benefits expenses**, increased by 7 million reais, or 0.5%, mainly due to the salary inflation adjustment, in addition to other net costs for termination benefits of 56 million reais;
- **other operating expenses** increased by 212 million reais, or 12.2%, from 1,736 million reais in 2015 to 1,948 million reais in 2016, as a result of an increase in TLC operating fees and charges;
- depreciation and amortization increased by 423 million reais, from 3,362 million reais in 2015 to 3,785 million reais in 2016 due to the effect of the acceleration of investments in the past two years.

**Employees**

The number of employees was 9,849 at December 31, 2016, a decrease of 3,193 employees compared to 13,042 at December 31, 2015.

\* \* \*

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 Unit 4.2.2 Brazil .

v **Discontinued operations/Non-current assets held for sale (Sofora Telecom Argentina group)**

On March 8, 2016, the TIM Group completed the sale of Sofora-Telecom Argentina group after receiving approval from Enacom, the Argentine communications regulator.

A summary is provided below 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 related average exchange rate (10.26890 pesos per euro).

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(millions of euros)		1.1- 3.8. 2016	As of December 31, 2015
<b>Revenues</b>		<b>504</b>	<b>3,943</b>
<b>Operating profit (loss)</b>		<b>133</b>	<b>1,035</b>
Finance income (expenses), net		(42)	(94)
<b>Profit (loss) before tax from Discontinued operations/Non-current assets held for sale</b>		<b>91</b>	<b>941</b>
Income tax expense		(32)	(320)
<b>Profit (loss) after tax from Discontinued operations/Non-current assets held for sale</b>	<b>(a)</b>	<b>59</b>	<b>621</b>
Other minor entries	(b)		(10)
<b>Profit (loss) from Discontinued operations/Non-current assets held for sale</b>	<b>(c= a+b)</b>	<b>59</b>	<b>611</b>
<b>Income statement effects on the selling entities:</b>			
Net gains on disposal		307	
Transfer to the separate consolidated income statement of the Reserve for exchange differences on translating foreign operations		(304)	
Income tax expense relating to the disposal		(15)	
	<b>(d)</b>	<b>(12)</b>	
<b>Profit (loss) from Discontinued operations/Non-current assets held for sale</b>	<b>(c+d)</b>	<b>47</b>	<b>611</b>
<i>Attributable to:</i>			
<b>Owners of the Parent</b>		<b>(3)</b>	<b>89</b>
Non-controlling interests		50	522

Further details are provided in the Note Discontinued operations/Non-current assets held for sale of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

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**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.

	<b>Year ended December 31,</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
	<b>(millions of euros)</b>		
Cash flows from (used in) operating activities	5,399	5,706	5,070
Cash flows from (used in) investing activities	(4,740)	(3,964)	(5,385)
Cash flows from (used in) financing activities	(1,210)	(1,263)	(902)
Cash flows from (used in) Discontinued operations/Non-current assets held for sale		(45)	(19)
<b>Aggregate cash flows (A)</b>	<b>(551)</b>	<b>434</b>	<b>(1,236)</b>
<b>Net cash and cash equivalents at beginning of the year (*) (B)</b>	<b>3,952</b>	<b>3,216</b>	<b>4,910</b>
<b>Net foreign exchange differences on net cash and cash equivalents (C)</b>	<b>(155)</b>	<b>302</b>	<b>(458)</b>
<b>Net cash and cash equivalents at end of the year (*) (D=A+B+C)</b>	<b>3,246</b>	<b>3,952</b>	<b>3,216</b>

(\*) For further details please see the Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015 of the Consolidated Financial Statements included elsewhere in this Annual Report.

**Cash flows from operating activities.** Cash flows from operating activities were 5,399 million euros in 2017, 5,706 million euros in 2016 and 5,070 million euros in 2015.

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**2017 compared to 2016**

The decrease of 307 million euros in 2017, compared to 2016, was mainly attributable to:

- a positive effect of net change in miscellaneous receivables/payables and other assets/liabilities of 995 million euros, a net source of 80 million euros in 2017 compared to a net use of 915 million euros in 2016;
- a positive effect of change in trade receivables and net amounts due from customers on construction contracts equal to 689 million euros, a net source of 379 million euros in 2017 compared to a net use of 310 million euros in 2016;
- a positive effect of change in provisions for employee benefits of 568 million euros, a net source of 437 million euros in 2017 compared to a net use of 131 million euros in 2016;
- a positive effect of impairment losses (reversals) on non-current assets (including investments) of 44 million euros, a net source of 50 million euros in 2017 compared to a net source of 6 million euros in 2016; and
- an increase in depreciation and amortization of 182 million euros from 4,291 million euros in 2016 to 4,473 million euros in 2017.

Such increases in cash flows were more than offset by:

- a decrease in profit (loss) from continuing operations of 632 million euros, a profit of 1,287 million euros in 2017 compared to a profit of 1,919 million euros in 2016;
- a negative effect of net change in deferred tax assets and liabilities equal to 267 million euros, a net use of 229 million euros in 2017 compared to a net source of 38 million euros in 2016;
- a negative effect of change in trade payables of 834 million euros, a net use of 605 million euros compared to a net source of 229 million euros in 2016; and
- a negative effect of net change in current income tax receivables/payables equal to 1,096 million euros, a net use of 515 million euros in 2017 compared to a net source of 581 million euros in 2016.

**2016 compared to 2015**



The increase of 636 million euros in 2016, compared to 2015, was mainly attributable to:

- an increase in profit (loss) from continuing operations of 1,869 million euros, a profit of 1,919 million euros in 2016 compared to a profit of 50 million euros in 2015;
- a positive effect of net change in deferred tax assets and liabilities equal to 83 million euros, a net source of 38 million euros in 2016 compared to a net use of 45 million euros in 2015;
- a positive effect of change in trade payables of 710 million euros, a net source of 229 million euros compared to a net use of 481 million euros in 2015;
- a positive effect of losses (gains) realized on disposals of non-current assets (including investments) of 328 million euros, a net use of 15 million euros in 2016 compared to a net use of 343 million euros in 2015;
- a positive effect of net change in current income tax receivables/payables equal to 568 million euros, a net source of 581 million euros in 2016 compared to a net source of 13 million euros in 2015; and
- an increase in depreciation and amortization of 156 million euros, from 4,135 million euros in 2015 to 4,291 million euros in 2016.

Such increases in cash flows were offset in part by:

- a negative effect of net change in miscellaneous receivables/payables and other assets/liabilities of 1,549 million euros, a net use of 915 million euros in 2016 compared to a net source of 634 million euros in 2015;
- a negative effect of change in trade receivables and net amounts due from customers on construction contracts equal to 720 million euros, a net use of 310 million euros in 2016 compared to a net source of 410 million euros in 2015;

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- a negative effect of change in provisions for employee benefits of 520 million euros, a net use of 131 million euros in 2016 compared to a net source of 389 million euros in 2015; and
- a negative effect of impairment losses (reversals) on non-current assets (including investments) of 247 million euros, a net source of 6 million euros in 2016 compared to a net source of 253 million euros in 2015.
- Cash flows used in investing activities. Cash flows used in investing activities were 4,740 million euros in 2017, 3,964 million euros in 2016 and 5,385 million euros in 2015.

**Cash flows used in investing activities.** Cash flows used in investing activities were 4,740 million euros in 2017, 3,964 million euros in 2016 and 5,385 million euros in 2015.

**2017 compared to 2016**

The increase in cash used in investing activities in 2017 compared to 2016 of 776 million euros was due to:

- an increase in capital expenditures (intangible and tangible assets on a cash basis) of 656 million euros, 5,314 million euros in 2017 compared to 4,658 million euros in 2016;
- a decrease of 492 million euros in proceeds from sale that result in a loss of control of subsidiaries or other businesses, net of cash disposed of, nil in 2017 compared to 492 million euros in 2016; and
- a decrease of 12 million euros in proceeds from sale/repayments of intangible, tangible and other non-current assets, a net source of 30 million euros in 2017 compared to a net source of 42 million euros in 2016.

Such effects were in part offset by:

- a positive effect of change in financial receivables and other financial assets of 291 million euros, a net source of 466 million euros in 2017 compared to a net source of 175 million euros in 2016.

**2016 compared to 2015**

The decrease in cash used in investing activities in 2016, compared to 2015, of 1,421 million euros was due to:

- an increase of 492 million euros in proceeds from sale that result in a loss of control of subsidiaries or other businesses, net of cash disposed of, 492 million euros in 2016 compared to nil in 2015;

- a decrease in capital expenditures (intangible and tangible assets on a cash basis) of 768 million euros, 4,658 million euros in 2016 compared to 5,426 million euros in 2015; and
- a positive effect of change in financial receivables and other financial assets of 810 million euros, a source of 175 million euros in 2016 compared to a net use of 635 million euros in 2015.

Such effects were offset in part by:

- a decrease of 675 million euros in proceeds from sale/repayments of intangible, tangible and other non-current assets, a net source of 42 million euros in 2016 compared to a net source of 717 million euros in 2015.

**Cash flows used in financing activities.** Cash flows used in financing activities were 1,210 million euros in 2017, 1,263 million euros in 2016 and 902 million euros in 2015.

Cash flows used in financing activities in 2017 of 1,210 million euros reflected mainly the following:

- a net use in financial liabilities and other of 1,984 million euros, as a result of the issuance of new debt, a source of 2,630 million euros, the change in current financial liabilities and other, a net use of 1,188 million euros and the repayments of non-current financial liabilities, a use of 3,426 million euros;
- a net source of 997 million euros due to changes in hedging and non-hedging derivatives under financial assets/financial liabilities; and
- the payment of dividends of 235 million euros.

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Cash flows used in financing activities in 2016 of 1,263 million euros reflected mainly the following:

- a net use in financial liabilities and other of 1,040 million euros, as a result of the issuance of new debt, a source of 3,561 million euros, the change in current financial liabilities and other, a net use of 437 million euros and the repayments of non-current financial liabilities, a use of 4,164 million euros; and
- the payment of dividends of 227 million euros.

Cash flows used in financing activities in 2015 of 902 million euros reflected mainly the following:

- a net use in financial liabilities and other of 1,729 million euros, as a result of the issuance of new debt, a source of 5,054 million euros, the change in current financial liabilities and other, a net source of 408 million euros and the repayments of non-current financial liabilities, a use of 7,191 million euros;
- the payment of dividends of 204 million euros; and
- the changes in ownership interests in consolidated subsidiaries of 845 million euros.

**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 26,091 million euros at December 31, 2017, compared to 25,955 million euros at December 31, 2016 and to 28,475 million euros at December 31, 2015.

In our 2018-2020 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, 2017, 2016 and 2015 is set forth in the following table.

	<b>As of December 31,</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
	<b>(millions of euros)</b>		
Non-current financial liabilities	28,108	30,469	30,518
Current financial liabilities	4,756	4,056	6,224
Financial liabilities directly associated with Discontinued operations/Non-current assets held for sale			348
<b>Gross financial debt (A)</b>	<b>32,864</b>	<b>34,525</b>	<b>37,090</b>
<b>Non-current financial assets (B)</b>	<b>(1,768)</b>	<b>(2,698)</b>	<b>(2,989)</b>
<b>Current financial asset:</b>			
Securities other than investments	(993)	(1,519)	(1,488)
Financial receivables and other current financial assets	(437)	(389)	(352)
Cash and cash equivalents	(3,575)	(3,964)	(3,559)
<b>Total current financial assets (C)</b>	<b>(5,005)</b>	<b>(5,872)</b>	<b>(5,399)</b>
<b>Financial assets relating to Discontinued operations/Non-current assets held for sale (D)</b>			<b>(227)</b>
<b>Financial assets (E=B+C+D)</b>	<b>(6,773)</b>	<b>(8,570)</b>	<b>(8,615)</b>
<b>Net financial debt (A+E)</b>	<b>26,091</b>	<b>25,955</b>	<b>28,475</b>

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The non-current portion of gross financial debt was 28,108 million euros at December 31, 2017, 30,469 million euros at December 31, 2016 and 30,518 million euros at December 31, 2015, and corresponds to 85.5% 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).

**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)
<b>Net financial debt as of December 31, 2016</b>	<b>25,955</b>
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)
<b>Net change in 2017</b>	<b>136</b>
<b>Net financial debt as of December 31, 2017</b>	<b>26,091</b>

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,				Changes (a-b)
	2017 (a)	% of total	2016 (b)	% of total	
	(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					
<i>Adjustments</i>					
<b>Total consolidated capital expenditures</b>	<b>5,701</b>	<b>100.0</b>	<b>4,876</b>	<b>100.0</b>	<b>825</b>
<i>% on revenues</i>	28.8		25.6		

**Capital expenditures** in 2017 totaled 5,701 million euros, an increase of 825 million euros from 2016. In particular:

- 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

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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.

**CHANGE IN NET FINANCIAL DEBT DURING 2016**

The following table summarizes the main transactions which had an impact on the change in net financial debt during 2016:

	(millions of euros)
<b>Net financial debt as of December 31, 2015</b>	<b>28,475</b>
Capital expenditures	4,876
Change in finance lease contracts	232
Dividends paid	227
Financial investments	15
Share capital increases/decreases	(4)
Disposal of investments and other divestitures	(745)
Cash flows from operating activities, net of other uses (sources)	(7,121)
<b>Net change in 2016</b>	<b>(2,520)</b>
<b>Net financial debt as of December 31, 2016</b>	<b>25,955</b>

In particular:

- **Capital expenditures on an accrual basis** were 4,876 million euros in 2016, a decrease of 321 million euros compared to 2015. The breakdown is as follows:

	Year ended December 31,				Changes (a-b)
	2016 (a)	% of total	2015 (b)	% of total	
	(millions of euros, except percentages)				
Domestic (*)	3,709	76.1	3,900	75.0	(191)
Brazil	1,167	23.9	1,289	24.8	(122)

Other activities	0.0	8	0.2	(8)
<i>Adjustments</i>				
Total consolidated capital expenditures	<b>4,876</b>	<b>100.0</b>	<b>5,197</b>	<b>100.0</b>
<i>% on revenues</i>	25.6		26.4	

(\*) 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; without that change, the capital expenditures of the Domestic Business Unit for 2016 would have totaled 3,702 million euros.

Capital expenditures in 2016 totaled 4,876 million euros, a decline of 321 million euros relative to 2015. In particular:

- the Domestic Business Unit posted capital expenditures of 3,709 million euros, a decrease of 191 million euros compared to 2015, which comprised, inter alia, an investment for the user rights related to the L band frequencies, of 231 million euros, and for the extension of the GSM license in the amount of 117 million euros.

The Group continued to engage in selective capital expenditures by identifying projects with higher returns, targeted at innovation and transformation, while maintaining its focus on ultrabroadband

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coverage and service quality. In the domestic market, capital expenditures for the development of next-generation network (NGN) infrastructure enabled the fiber-optic coverage to reach 60% of housing units and the 4G (LTE) network to cover 96% of the population;

- the **Brazil Business Unit** reported a decline of 122 million euros in capital expenditures in 2016, including a negative exchange rate effect of 55 million euros, compared to 2015 due to the combined effects of the efficiency measures initiated in the course of 2016 (renegotiation of contracts with suppliers and projects to optimize recurring expenses on the traditional investment components) and a more efficient allocation of capital to infrastructure investments for the development of 4G coverage. Through these initiatives the development of the mobile broadband network was advanced, with a urban population coverage at year-end 2016 of 89% on the 3G network, up 7 percentage points from 2015, and 74% on the 4G network, up 15 percentage points compared to 2015.
- **Change in finance lease contracts** amounted to 232 million euros in 2016. This item mainly represents the higher value of tangible assets under finance lease, which also reflects the associated higher financial payables, recorded mainly as a result of contractual renegotiations by TIM S.p.A. in 2016 within the real estate transformation project and the new rental agreements for industrial motorcars, and of the finance lease contracts concluded by the TIM Brasil group with respect to the telecommunications towers.
- **Financial investments** amounted to 15 million euros in 2016 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** amounted to 745 million euros in 2016 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.

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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 receivables to factoring companies completed during 2016 resulted in a positive effect on net financial debt of 1,091 million euros as of December 31, 2016, compared to 1,106 million euros as of December 31, 2015.

**Gross Financial Debt**

At December 31, 2017, on a consolidated basis, our gross financial debt amounted to 32,864 million euros, compared to 34,525 million euros at December 31, 2016, and included non-current financial liabilities (long-term debt) of 28,108 million euros, compared to 30,469 million euros at December 31, 2016 and current financial liabilities (short-term debt) of 4,756 million euros, compared to 4,056 million euros at December 31, 2016.

As of December 31, 2017, approximately 72.5% of our gross financial debt was denominated in Euro, while the remainder was primarily denominated in U.S. Dollars, Pound Sterling and Brazilian Reais.

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The following table sets out the currency composition of our gross financial debt:

	As of December 31, 2017		As of December 31, 2016	
	(millions of foreign currency)	(millions of euros)	(millions of foreign currency)	(millions of euros)
USD	7,168	5,977	7,504	7,119
GBP	1,266	1,427	2,017	2,356
BRL	5,863	1,478	7,128	2,075
JPY	20,031	148	20,032	162
EURO		23,834		22,813
<b>Total gross financial debt</b>		<b>32,864</b>		<b>34,525</b>

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 2017.

		<b>As of December 31, 2017</b> <b>EMTN Programme</b> <b>(millions of euros)</b>
<b>Total amount of the program (max outstanding notes)</b>	(A)	<b>20,000.00</b>
Notes and bonds issued		30,802.80
Notes and bonds repaid		(17,329.66)
<b>Net utilization of the program</b>	(B)	<b>13,473.14</b>
<b>Remaining available amount of the program</b>	(A-B)	<b>6,526.86</b>

*Notes and bonds*

At December 31, 2017 we had notes and bonds outstanding amounting to 22,202 million euros, compared to 22,964 million euros at December 31, 2016. The nominal repayment amount at December 31, 2017 was 21,775 million euros, a decrease of 642 million euros compared to 22,417 million euros at December 31, 2016.

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Changes in bonds during 2017 were as follows:

	<b>Currency</b>	<b>Amount (millions)</b>	<b>Issue date</b>
<b>NEW ISSUES</b>			
Telecom Italia S.p.A. 1,000 million euros 2.500% maturing 07/19/2023	Euro	1,000	01/19/2017
Telecom Italia S.p.A. 1,250 million euros 2.375% maturing 10/12/2027	Euro	1,250	10/12/2017

	<b>Currency</b>	<b>Amount (millions)</b>	<b>Repayment date</b>
<b>REPAYMENTS</b>			
Telecom Italia S.p.A. 545 million euros 7.000%(1)	Euro	545	01/20/2017
Telecom Italia S.p.A. 628 million euros 4.500%(2)	Euro	628	09/20/2017
Telecom Italia S.p.A. 750 million GBP 7.375%	GBP	750	12/15/2017

(1) Net of buybacks by TIM S.p.A. of 455 million euros during 2015.

(2) Net of buybacks by TIM S.p.A. of 372 million euros during 2015.

With respect to Telecom Italia S.p.A.'s 2002-2022 bonds, reserved for subscription by employees of the Group, the nominal amount at December 31, 2017 was 204 million euros, an increase of 3 million euros compared to 201 million euros at December 31, 2016.

For further details about the outstanding notes and bonds as of December 31, 2017 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, 2017.

	<b>As of December 31, 2017</b>	<b>As of December 31, 2016</b>
	<b>Committed</b>	<b>Committed</b>
	<b>Drawdown</b>	<b>Drawdown</b>
	<b>(billions of euros)</b>	
Revolving Credit Facility expiring May 2019	4.00	4.00



Revolving Credit Facility expiring March 2020	3.00	3.00
<b>Total</b>	<b>7.00</b>	<b>7.00</b>

TIM has two syndicated Revolving Credit Facilities for 4 billion euros and 3 billion euros, expiring on May 24, 2019 and March 25, 2020, respectively. No amounts have been drawn from these facilities. On January 16, 2018, the two Revolving Credit Facilities were simultaneously closed and replaced by a new Revolving Credit Facility for the amount of 5 billion euros, expiring in 5 years.

TIM also has access to:

- a bilateral term loan from UBI Banca (former Banca Regionale Europea) expiring July 2019 for 200 million euros, drawn down for the full amount;
- two bilateral term loans from Mediobanca, one for 134 million euros expiring in November 2019 and another for 75 million euros expiring in July 2020, drawn down for the full amount;
- a bilateral term loan from ICBC expiring in July 2020 for 120 million euros, drawn down for the full amount;
- a bilateral term loan from Intesa Sanpaolo expiring August 2021 for 200 million euros, drawn down for the full amount;
- a hot money loan from Banca Popolare Emilia Romagna for 250 million euros, drawn down for the full amount and fully repaid at maturity on February 15, 2018;

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- a hot money loan from Intesa Sanpaolo expiring December 2018 for 200 million euros, drawn down for the full amount;

- a bilateral term loan from Intesa Sanpaolo expiring December 2018 for 2 billion euros, not yet drawn down. On December 21, 2017, TIM S.p.A. notified Mediobanca of the exercise of the early repayment option, in force on January 3, 2018, on the 150 million euros bilateral term loan expiring July 2020, for the total outstanding amount of 75 million euros.

On January 16, 2018, TIM S.p.A. exercised the early repayment option, in force on January 17, 2018, on the 2 billion euros bilateral term loan from Intesa Sanpaolo expiring December 2018.

***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 7.75 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, was approximately 4.8%.

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 as at December 31, 2017 of the TIM Group.

***Current financial assets and liquidity margin***

The TIM Group's available liquidity margin at December 31, 2017 amounted to 9,568 million euros, equal to the sum of:

Cash and cash equivalents and Current securities other than investments for a total of 4,568 million euros, compared to 5,483 million euros at December 31, 2016;

the new Revolving Credit Facility drawn up in January 2018 for 5,000 million euros. This margin is sufficient to cover Group financial liabilities due at least for the next 24 months.

In particular:

- Cash and cash equivalents amounted to 3,575 million euros, compared to 3,964 million euros at December 31, 2016. The different technical forms of investing available cash at December 31, 2017 included:

- 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 993 million euros, compared to 1,519 million euros at December 31, 2016. These forms of investment represent alternatives to the investment of liquidity with the aim of improving returns. They included 276 million euros of Treasury bonds, purchased respectively by TIM S.p.A. (256 million euros) and by Telecom Italia Finance S.A. (20 million euros), 524 million euros of bonds with various maturities purchased by Telecom Italia Finance S.A., all with an active market and consequently readily convertible into cash, and 193 million euros of investments in two 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 risks 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.

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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 56 million euros at December 31, 2017.

The guarantees provided by third parties for Group company obligations, amounting to 4,500 million euros at December 31, 2017, consisted of 1,580 million euros guarantees for loans received and 2,920 million euros of performance guarantees under outstanding contracts.

The guarantees provided by third parties for TIM S.p.A. obligations include the surety issued in favor of the Ministry of Economic Development for 38 million euros, for the commitment made by the Company to build equipment networks with eco-sustainable characteristics. In particular, the Company has made a commitment to achieve energy savings in the new LTE technologies of approximately 10% on infrastructure and 20% on transmission devices over a period of 5 years (compared to energy consumed by current technology). The Ministry of Economic Development has requested the extension of the guarantee until December 31, 2018.

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, 2017, the nominal repayment amounts of payables and the relating expiration dates were as follows:

	Amounts due as of December 31,						Total
	2018	2019	2020	2021	2022	After 2022	
	(millions of euros)						
Bonds	1,739	2,424	1,267	564	3,087	12,694	21,775
Amounts due to banks, other financial payables and liabilities	1,264	1,731	603	628	714	243	5,183
Finance lease liabilities	138	114	113	113	83	1,826	2,387
<b>Total</b>	<b>3,141</b>	<b>4,269</b>	<b>1,983</b>	<b>1,305</b>	<b>3,884</b>	<b>14,763</b>	<b>29,345</b>
Current financial liabilities	982						982

<b>Total</b>	<b>4,123</b>	<b>4,269</b>	<b>1,983</b>	<b>1,305</b>	<b>3,884</b>	<b>14,763</b>	<b>30,327</b>
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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.

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The table below sets forth, for the periods indicated, our total capital expenditures (on an accrual basis) allocated to the Business Units.

	<b>Year ended December 31,</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
	<b>(millions of euros)</b>		
<b>Capital expenditures on tangible assets:</b>			
Domestic	2,788	2,596	2,446
Brazil	621	639	784
Media and Other Operations			8
Adjustments and eliminations			
<b>Total capital expenditures on tangible assets(1)</b>	<b>3,409</b>	<b>3,235</b>	<b>3,238</b>
<b>Capital expenditures on intangible assets(2)</b>	<b>2,292</b>	<b>1,641</b>	<b>1,959</b>
<b>Total capital expenditures(3)</b>	<b>5,701</b>	<b>4,876</b>	<b>5,197</b>

(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 2018-2020 period at the TIM Group level in Italy and in Brazil are:

- 9 billion euros of investments in Italy, over 50% of which will be spent in network expansion and innovation;
- approximately 12 billion reais of investments in Brazil, will allow UBB expansion to continue.

\* \* \*

For details about market risk disclosures please see Item 11. Quantitative And Qualitative Disclosures About Market Risks .



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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 (both residential and business) 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 monitoring individual aspects, from its strategic role to its responsibility, objectives and policy.

Technological and business-based innovation were confirmed in 2017 as the central element in the response to change in the technological, market and competitive context. To this end, the Group has taken action in several ways:

- by continuing the action, initiated in 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 move towards the "Open Innovation" principle with the aim of maximizing the benefits derived from the integration of innovative contributions generated internally with external sources of innovative ideas;
- interaction with the start-up world in order to catalyse the latter's capacity for innovation through the TIM #Wcap acceleration programme and equity investments through TIM Venture. In 2017, TIM #Wcap launched a Call for Start-ups and two Calls for Partners;
- 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 details are provided in the following pages.

Innovation management is overseen, with different missions, by the 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 centres of expertise on the topic;

- traditional and digital partners, for the joint Go2market of digital services;
- research centres and universities, for cooperation and joint projects. In 2017, 22 research contracts came into effect, for a total value of 555,000 euros;
- Standardization Bodies and Associations: TIM remains very active within the main Standardisation Bodies and Associations, with 30 memberships in 2017, for a cost of 840,000 euros. On a national, but above all international, level there is a broad circle made up of standardisation 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. Finally, there are the 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.

The identification of themes around which projects are developed takes into account the Three-Year Technological Plan, the reference document for the Group, which provides guidelines for the evolution of the

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network, platform and services. Published annually, following a wide-ranging process involving all the areas of the company involved, the Plan identifies the main external factors (regulations, standards, vendors, other market operators) that may influence the company's strategies and highlights the emerging and cross-cutting technologies in other sectors that may be of interest to the Group.

The qualitative and/or quantitative objectives of each project may refer to a multi-year timeframe but they are in any case structured on an annual basis and defined so they can be objectively measured in compliance with standards concerning quality (ISO9001) and the environment (ISO14001); the operational processes of innovation, just as in general TIM's processes are based on the E-Tom reference standard of the TMF.

Overall, in 2017 TIM committed around 1,300 people to working on technological innovation and engineering activities, for an overall investment of 1,992 million euros, which is equivalent to around 13% of its domestic revenues.

**Activities for the future of mobility and networks: initiatives for 5G**

5G allows for 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<sup>6</sup> and URLLC<sup>7</sup> 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. In particular, in 2017 the technical communication initiative "Special 5G" was accomplished through 5G day, a sharing event with representatives from institutions and the industrial world, in addition to academic research, aimed at promoting the business ecosystem for the development of 5G solutions. It was followed up by TIM's "Notiziario Tecnico" (Technical Newsletter) e-magazine<sup>8</sup> which dedicated two issues to describing and further exploring network aspects and service aspects, respectively, enabled by 5G.

Three important initiatives were launched in 2017: Turin 5G, San Marino 5G and Bari-Matera 5G to provide these municipalities with 5G radio mobile coverage.

**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. As of today more than 130 companies and customers have visited the Lab, and among them around forty construction companies have agreed a partnership with TIM allowing them to use what the Lab

offers free of charge.

### **Research with Universities**

The Open Innovation activities for 2017 were largely concentrated on the new Innovation model pursued at TIM and guided by top management.

<sup>6</sup> Massive Machine Type Communication.

<sup>7</sup> Ultra Reliable and Low Latency Communications.

<sup>8</sup> Quarterly webzine with a technical educational slant, which since 1992 publishes detailed articles on technological innovations and services for Digital Life. A magnifying glass on transformation in the ICT world, where competitive collaboration between Telcos and OTTs facilitates new business scenarios, creating dynamic ecosystems in which TIM plays a key role. TIM's Notiziario Tecnico (Technical Newsletter) is duly registered at the Press Court of Rome Online Publications section since 05/07/2012 under no. 217/2012.

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In line with this, faced with significantly lower polarisation on services, communities and creative innovation, the focus was placed on technological innovation aspects, with particular emphasis on opportunities deriving from 5G. The new direction involved the resizing of the JOLs (closure of Pisa and Milan, resizing of Trento and Catania), and the activation in the remaining JOLs of projects with a strong technological approach: cognitive computing, 5G, applications in the network sector, industrial IoT applications, the strengthening of pre-commercial initiatives associated with Open IoT Lab, above all to Olivetti's benefit.

**Funded research activities**

TIM has always actively participated in innovation and research projects and initiatives funded by the European Commission, which allowed it not only to obtain funding of around 8 million euros in the three-year period 2015-2017, but also to participate in initiatives with highly innovative content where it developed and consolidated its know-how in rapidly evolving sectors, thanks to collaboration with important European research centres, as well as North American, Korean and Japanese ones.

In this context the activities performed for the 5G projects funded should be highlighted, which have enabled TIM to enrich its range of skills, acquiring a role recognized at European level which now allows it to activate various 5G pilot projects in Italy well in advance of the expected timing.

**Patents and Intellectual Property Rights**

In addition to contributing to developments within the Company, TIM produces a significant number of patents: in the 2015-2016 period it filed over 120 patents. In order to maximize their value, a spin-up model was recently developed, that is the launch of start-ups that have received assets and the rights to use patents in exchange for equity options.

In 2017, the Group's portfolio of patents had grown to include 25 new patents filed and several other proposals undergoing assessment. The patenting areas relate to the whole ICT sector, with areas of excellence in the mobile sector. In more detail:

- 3,136 patents owned by TIM as of November 2017 (of which 2,557 granted), relating to 609 patent categories;
- 254 patents resulting from collaboration with universities and research institutes since the collaboration was launched (1997).

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 16 license-holders) and has granted several licences. Also note the participation in the 2017 Techshare Day where TIM and the Politecnico di Torino made a selection of patents and technologies available to Italian SMEs with the aim of expanding the assessment of the research results and developing relations with the industrial sector.

**Research and Development in Brazil**

The Innovation & Technology Department, headed by the CTO of TIM Brasil, is responsible for Research and Development (R&D) activities. Its main responsibilities are defining the technological innovation of the network, the evolutionary needs for new technologies and devices and the architectural guidelines together with the development of strategic partnerships, so as to exploit the 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 28 people in the Networks area, including telecommunications engineers, electricians and electronics engineers, IT experts and other technicians of various origins, competences and experiences, who cover all the 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

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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 Centre 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 metres, able to accommodate more than 60 people. This new office could host technicians and researchers and 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 2017, 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, over 22 million reais were invested in the 2016/17 period, including the new lab premises, and, according to the 2018-2020 budget, additional investments worth 17 million reais are planned.

The Innovation & Technology department has worked on projects and initiatives aiming to ensure the evolution of the business of TIM Brasil through the recommendation of sustainable, efficient network platforms and disruptive models, including anticipating the availability of new services. These projects can be divided into five groups:

- New generation networks
- Future Internet applications
- Positive environmental impacts
- Positive social impacts
- Open Lab initiatives

**New generation network projects**

The reassignment of the 1.800 MHz, 850 MHz and 2.100 MHz bandwidths from 2G/3G to 4G gives TIM Brasil 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 88% 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<sup>9</sup> in order to manage the spectrum cleaning and avoid interference problems with the analogue TV transmission service. 78% of the LTE devices used by the current users of TIM Brasil services are enabled for the 700 MHz bandwidth; at the end of 2017, over 830 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<sup>10</sup>. In 2016 the tests were extended to live networks, allowing TIM Brasil to set up the

<sup>9</sup> Entidade Administradora de Processo de Redistribuição e Digitalização de Canais de TV e RTV.

<sup>10</sup> SMI: IP Multimedia Subsystem, solutions focused on functional tests, specific analyses and interoperability with the so-called legacy system .

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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 July 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 2017, over 1,000 cities could use this service;

as regards the Network Functions Virtualization ( **NFV** ) and Software Defined Networks ( **SDN** ), some initiatives were launched, such as the creation of the TIM Brasil NFV Program, developed through four working groups which have a mandate to define technical requirements, infrastructural plans, roadmaps of the virtualized network functions ( **VNF** ), open lab specifications and reference architecture compliant with the ETSI standard on NFVs. The main drivers that push the adoption of these innovative network approaches are reduction of the CapEx/OpEx, faster time to market, optimization and boosting innovation.

**Projects with positive environmental 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%. At present, this is the biggest RAN Sharing agreement to be reached worldwide and it allows the major Brazilian cities to use 4G services.

**New generation network projects, Future Internet applications, Positive environmental impact, Positive social impacts**

According to TIM Brasil, 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.

**Open Lab initiatives**

In 2017 TIM Brasil 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 Brasil 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.





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<b>Item 5. Operating And Financial Review And Prospects</b>	<b>Cautionary Statement For Purposes Of The Safe Harbor Provisions Of The United States Private Securities Litigation Reform Act Of 1995</b>
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**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 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;
- the impact of political developments in Italy, Brazil and other countries in which we operate;
- 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 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.

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**Cautionary Statement For Purposes Of The Safe**

**Harbor Provisions Of The United States Private Securities**

**Litigation Reform Act Of 1995**

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.

**Table of Contents****Item 6. Directors, Senior Management and Employees****Directors****Item 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES****6.1 DIRECTORS**

On May 4, 2017, the Shareholders Meeting of the Company elected the Board of Directors of TIM, which will remain in office until approval of the 2019 annual financial statements.

The Shareholders Meeting established the number of Directors at 15; 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); authorized the Directors to continue with the activities specified in their respective *curricula vitae*, and released them from restrictions on competition, as permitted under Article 2390 of the Italian Civil Code.

On May 5, 2017, the Board of Directors appointed Giuseppe Recchi as Chairman of the Company's Board of Directors, Arnaud Roy de Puyfontaine as Deputy Chairman of the Company and Flavio Cattaneo as Chief Executive Officer of the Company.

On June 1, 2017, the Board of Directors approved a change with respect to officers, with the appointment of Arnaud Roy de Puyfontaine as Chairman of the Board of Directors and Giuseppe Recchi as Deputy Chairman.

On July 24, 2017, the Board of Directors accepted the resignation, effective July 28, 2017, of Flavio Cattaneo as Chief Executive Officer and from the Board of Directors. In the meeting held on July 27, 2017, the Board of Directors temporarily reassigned the responsibilities of Chief Executive Officer to Executive Chairman Arnaud Roy de Puyfontaine, except for those responsibilities related to the Security Function and the company Telecom Italia Sparkle, which have been assigned, on an interim basis, to the Deputy Chairman, Giuseppe Recchi.

Subsequently, on September 28, 2017, the Board of Directors appointed Amos Genish as Chief Executive Officer and as General Manager. The Board of Directors also renewed the appointments of Arnaud Roy de Puyfontaine as Executive Chairman and Giuseppe Recchi as Deputy Executive Chairman.

During the Board meeting of March 22, 2018, Giuseppe Recchi resigned effective immediately. Franco Bernabè was appointed as Deputy Chairman and the Board reassigned to him the powers over the Security department and those activities and assets of the Company that are important from a defense and national security perspective.

Additionally, during the Board meeting of March 22 2018, each of the following members resigned, effective April 24, 2018, before the Shareholders Meeting to be held on April 24, 2018: Arnaud de Puyfontaine, Camilla Antonini, Frédéric Crépin, Félicité Herzog, Anna Jones, Marella Moretti and Hervé Philippe. As a consequence, the Board of Directors called for a meeting of the Ordinary Shareholders to be held on May 4, 2018 for the renewal of the Board of Directors.

At April 9, 2018, the Board of Directors of TIM was composed of the following directors:

Name	Age	Position	Appointed
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Arnaud Roy de Puyfontaine	54	Executive Chairman/Director	2017
Franco Bernabè(2)(3)	69	Deputy Chairman/Director	2017
Amos Genish(1)	57	Chief Executive Officer/Director/General Manager	2017
Camilla Antonini(2)	51	Director	2017
Ferruccio Borsani(2)	59	Director	2017
Lucia Calvosa(2)	56	Director	2017
Francesca Cornelli(2)	55	Director	2017
Frédéric Crépin	48	Director	2017
Dario Frigerio(2)	55	Director	2017
Félicité Herzog(2)	50	Director	2017
Anna Jones(2)	42	Director	2017
Marella Moretti(2)	52	Director	2017
Hervé Philippe	59	Director	2017
Danilo Vivarelli(2)	53	Director	2017

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**Item 6. Directors, Senior Management and Employees**

**Directors**

- (1) He was appointed as Chief Executive Officer starting from September 28, 2017.
- (2) Independent Director according to legal requirements. For details on the criteria applied to determine independence, see Item 10. Additional Information 10.1 Corporate Governance .
- (3) During the Board meeting of March 22, 2018, Executive Deputy Chairman (and Chairman of the Strategy Committee) Giuseppe Recchi resigned, effective immediately. Franco Bernabè was appointed as Deputy Chairman and the Board reassigned to him the powers over the Security department and those activities and assets of the Company that are important from a defense and national security perspective.
- On April 9, 2018 the Secretary of the Board of Directors was the General Counsel of TIM, Agostino Nuzzolo.

In 2017:

- the Board of Directors met 13 times, with meetings generally scheduled pursuant to a calendar set forth in advance;
- the Control and Risk Committee, which as of April 9, 2018 was composed of Lucia Calvosa (Chairwoman), Camilla Antonini, Francesca Cornelli, Marella Moretti and Félicité Herzog, held 14 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 9, 2018 was composed of Anna Jones (Chairwoman), Ferruccio Borsani, Frédéric Crépin, Hervé Philippe and Danilo Vivarelli, met 17 times; and
- the Strategic Committee met 3 times. With Giuseppe Recchi's (Chairman) resignation on March 22, 2018, as of April 9, 2018, the Strategic Committee was composed of Arnaud Roy de Puyfontaine, Amos Genish, Franco Bernabè and Dario Frigerio.

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 .

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**6.1.1 BIOGRAPHICAL DATA**

The following are the selected biographical data of the Directors as of April 9, 2018.

**Arnaud Roy de Puyfontaine:** Arnaud Roy de Puyfontaine was born in Paris in 1964. Since May 4, 2017, he has been a Director of the Board of Directors of TIM S.p.A., and, since June 1, 2017 he has served as Executive Chairman. Since June 2017, he has been a member of the strategic committee. Mr. de Puyfontaine was Deputy Chairman of TIM from April 2016 to June 2017 and has been a member of the strategic committee since July 2016. He was Chairman of the strategic committee from September 2016 to May 2017. He is a graduate of the ESCP (1988), the Multimedia Institute (1992) and Harvard Business School (2000). 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, managing the acquisition of Télé Star and Télé Star Jeux, and starting 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 merger and acquisition 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, Mr. Puyfontaine 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, and in June 2011, was appointed Executive Vice President of Hearst Magazines International before being appointed Managing Director of Western Europe in August 2013. From May 2012, he joined the Board of Directors of Schibsted. He has been Chairman of ESCP Europe Alumni. From January to June of 2014, Mr. Puyfontaine 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 Chairman of the Management Board. Current positions within the Vivendi group include: Chairman of the Management Board of Vivendi, Member of the Supervisory Board of Canal+ Group, Member of the Supervisory Board of StudioCanal and Chairman of the Supervisory Board of Universal Music France. He is also an Independent Director of Schibsted Media Group, a



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member of the Advisory Committee of Innit, a permanent representative of Vivendi on the Supervisory Board of Banijay Group (SAS), non-executive Chairman of Gloop Networks plc. and Chairman of the French-American Foundation.

**Franco Bernabè:** Franco Bernabè was born in Vipiteno (Bolzen) on September 18, 1948. He earned a degree with honors in Economics and Political Science at the University of Turin in 1973. Since May 4, 2017, he has been an independent director of TIM and since June 1, 2017 he has been a member of the Strategic Committee. Mr. Bernabè worked for two years as a post-graduate fellow at the Einaudi Foundation. He started his professional career at FIAT and then joined ENI in 1983, where he became CEO in 1992. During his two terms at ENI, he managed the radical transformation of the Company that was listed on the NYSE in 1995. Franco Bernabè is Chairman of Nexi S.p.A. (former ICBPI), the holding company of the ICBPI Group, the banking group that supports banks and financial institutions in the growth and consolidation in their respective markets, and Chairman of FB Group, a family investment vehicle based in Rome. Until 2013, he was Chairman and CEO of TIM and Chairman of GSMA (the international organization of mobile network operators). He was Vice Chairman of Rothschild Europe, a member of the board and Chairman of the Audit Committee of PetroChina, a member of the International Council of JP Morgan, Vice chairman of Unindustria, member of the Executive Committee of Confindustria and a member of the European Roundtable. He has been an independent director of several non-profit organizations, including the Council on Foreign Relations and the Peres Center for Peace. He was Italy's Special Representative for the reconstruction of Kosovo in the year 2000, Chairman of Palaexpo, the leading cultural institution of the city of Rome, Chairman of MART-Modern Arts Museum of Trento and Rovereto (2004-2014), Chairman of La Biennale di Venezia (2001-2003) and Vice-President of Roma Europa Festival (2006-2008). Currently serves pro bono as Chairman of Fondazione La Quadriennale of Rome and as Chairman of the Italian National Commission for UNESCO. In recognition of his lifetime achievements, he was knighted in 2011 by the President of the Italian Republic.

**Amos Genish:** Amos Genish was born in Hedera, Israel in 1960. Since September 28, 2017, he has been Chief Executive Officer of TIM and a member of Strategic Committee. He holds a B.A. in Economics and Accounting from Tel Aviv University. From 1986 to 1989, Amos worked in one of the largest accounting firms in Israel (now KMPG Israel), where he was involved in the audit and tax work of large holding companies. In 1989, Amos became CFO of the start-up Edunetics Ltd., which developed comprehensive curriculum multimedia-based systems mostly for the US school market. In 1992, along with the CEO, he led the company's IPO on Nasdaq and became CEO in 1995. Until the end of 2016, Amos Genish was CEO of Telefonica Brasil/Vivo (over 20 billion euros market cap at time). During his tenure, Telefonica Brasil/Vivo outperformed the Brazilian telecom market in revenue and EBITDA growth, as well as in total shareholder returns. Amos joined Telefónica at the beginning of 2015, when it acquired GVT, an innovative and fast-growing telecom and Pay TV operator, that he co-founded and for which he served as CEO starting in 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 and from 2011 to 2013, Amos was part of Vivendi's Management Board. In 2014, he led the negotiations of GVT's sale to Telefónica for 7.45 billion euros. Prior to this, Amos was CEO of GVT's 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 the beginning of 2017 to July 2017, he held the position of Chief Convergence Officer of Vivendi. In this role, Amos oversees the Group's convergence strategy between content, platforms and distribution. Amos 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 Itaú Unibanco Holding Sa, the largest Brazilian publicly quoted bank. In 2016, Amos was ranked as Latin America's best CEO in the Technology, Media and Telecommunications industry by Institutional Investor.

**Camilla Antonini:** Camilla Antonini was born in Rome, on May 19, 1966. She holds a Law degree from the University of La Sapienza (Rome, Italy). Since May 4, 2017, she has been an independent director of TIM and since June 1, 2017 she has been a member of the Control and Risk Committee. From 1994 to 1998, she worked at the Enrico Navarra Gallery in Paris. She was notably in charge of the English version of the Mare Chagall conference during the 1994 Le French May art festival for the inauguration of the Chagall exhibition organized by the gallery in Hong Kong. Since 2012, she has worked as a business reporter for L'ÉCO (Play Bac Presse), a prize-winning economic weekly newspaper aimed at young adults. Each week, Mrs. Antonini interviews a high-profile person about his or her professional career. As a writer, she contributed to the Arrigo Cipriani books L'Italie simplissime (published in Paris in 2008) and Simply Italian (published in New York in 2013). She also translates

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books (among them, a translation from *Tree Shaker. The story of Nelson Mandela*, by Bill Keller, The New York Times, 2008) and has worked on various art catalogs and DVDs. She is a founding member of the Clara Literary Prize jury, a short story competition open to young people under the age of 17, since 2007.

**Ferruccio Borsani:** Ferruccio Borsani was born in Locate Varesino (CO) on April 30, 1958 and received a degree in Mechanical Engineering from the Politecnico di Milano, specializing in business management at SDA Bocconi. Since May 4, 2017, he has been an independent director of TIM and since June 1, 2017 he has been a member of the Nomination and Remuneration Committee. He started his professional career with IBM Italy. Since February 2017, he has been CEO of Domusaura S.r.l.; since November 2016, he has been an Equity Partner of Moffulabs S.r.l.; since September 2016, he has been an Equity Partner of Italian Pick S.r.l.; since February 2015, he has been Chairman of Solutions 30 Italia. From January 2013 to October 2014, he was Chief Commercial and Operation Officer of Vodafone Italia where he previously was Director of Enterprise Division, Director of Customer Operations and Regional Vice President North East and North West. He joined Omnitel in 1996 as CRM Director. From 1992 to 1996, he was Quality and Partnership Manager of DHL Italy.

**Lucia Calvosa:** Lucia Calvosa was born in Rome on June 26, 1961. Since August 2011, she has been an independent member of the Board of Directors of TIM S.p.A., as well as a member of the Control and Risk Committee, which she has chaired since April 2014. She is a professor of commercial law at the University of Pisa, where she has also previously taught Bankruptcy Law, Private Law and Banking Law. She served as Chair the degree course in Economics and Commerce at the University of Pisa for two terms, Chairs the Scientific Teaching Committee of a regional professional association of chartered accountants (Associazione Ordine Dottori Commercialisti dell'Alto Tirreno) and is a member of the Board of academic tutors for postgraduate research in institutions, business and work at the Cattolica University in Milan. A number of her works have been published, including three monographs: *La clausola di riscatto nella società per azioni*, Milan, 1995 ; *La partecipazione eccedente e i limiti al diritto di voto*, Milan, 1999 ; *Fondo patrimoniale e fallimento*, Milan, 2003 . She has collaborated on the most widely used and accredited manuals of commercial disciplines currently in circulation, as well as in numerous commentaries of company and bankruptcy law. She has been a member of the Pisa professional association of lawyers since 1987, and of the professional association of appeal lawyers since 1999, and has been a practicing lawyer for over twenty-five years, focusing in the areas of company law and bankruptcy. Mrs. Calvosa has been a member of the Commission Procedure Concorsuali e Crisi d'Impresa del C.N.F. She has been a member of the Board of Directors of the Fondazione Teatro di Pisa, of the Fondazione Arpa, of the Pisa Chamber of Commerce and of the Fondazione Pisa (formerly Fondazione Cassa di Risparmio di Pisa). From 2008 to 2011, she was Chairman of the Cassa di Risparmio di San Miniato S.p.A., and in connection with this post, she served as a member of the national committee of banks (Comitato delle Società Bancarie) and served on the board of the Italian banking association, ABI (Associazione Bancaria Italiana). Since November 2014, she has been an independent member of the Board of Directors of Editoriale Il Fatto S.p.A.. Since April 2015, she has been an independent member of the Board of Directors of Banca Monte dei Paschi di Siena S.p.A. In 2005, she was awarded the *Ordine del Cherubino* , bestowed by the University of Pisa to those professors, who have helped to enhance its prestige for outstanding scientific and cultural merits and their decisive contribution to academic life and to the functioning of the University . In February 2010, she was awarded a UNESCO medal for having contributed, with the publication of *Monumenta*, to highlighting and raising awareness of an important episode in Italian artistic culture in the spirit of UNESCO . Through a Presidential Decree of the Ministry of Economy and Finance, dated June 2, 2012, she was awarded, upon a proposal of ABI, a knighthood in the Order of Merit of the Italian Republic. In June 2015, she was awarded the *Ambrogio Lorenzetti* prize for the good governance in companies, as engaged in academic and cultural activities, internationally recognized and having promoted, as a Director, scientific rigor and independence as a value in highly complex and competitive company

contexts.

**Francesca Cornelli:** Francesca Cornelli was born in Milan in 1962. Since April 16, 2014, she has been an independent director of TIM S.p.A. and is member of the Control and Risk Committee. She is a Professor of Finance at the London Business School. She is the Director of Private Equity at LBS, a research institute of the London Business School. She previously held positions or taught at the Wharton School, the Fuqua School of Business at Duke University, The London School of Economics, the Indian School of Business in Hyderabad and the New Economic School in Moscow. Her interests include corporate governance, private equity, privatization, bankruptcy, IPOs and innovation policy. Her latest publications concern research on short sales, manager incentives, the impact of investments from private equity companies on the board and the importance of increasing transparency in companies and its effects on manager incentives. She has published several papers in major finance and economic journals and gives regular talks in major conferences and universities and

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international institutions. She is director of the American Finance Association, a member of the Scientific Committee of the Banque de France Foundation, and a Research Fellow of the Center for Economic and Policy (CEPR). She is an editor of the Review of Financial Studies and has been an associate editor of the Journal of Finance, the Journal of Financial Intermediations and the Review of Economic Studies. She is a member of the Board of Intesa SanPaolo S.p.A. and has been a member of the Board of Swiss Re Europe and Swiss Re International. She obtained her B.A. at University Commerciale Bocconi, in Milano, Italy, and her M.A. and Ph. D. in Economics at Harvard University.

**Frédéric Crépin:** Frédéric Crépin was born on December 25, 1969. He graduated from the Institut d Études Politiques in Paris (Sciences-Po) and obtained a master's degree in European commercial law at the Université Panthéon-Assas (Paris II), a master's degree in labor and labor law at the Université Paris Ouest Nanterre La Défense (Paris X Nanterre), and a LLM (Master of Laws) of the New York University School of Law. Admitted to bars in Paris and New York, he began his career working as a lawyer in several law firms. Since May 4, 2017, he has been a board member of TIM S.p.A.; from June 1, 2017 he has been a member of the Nomination and Remuneration Committee and since July 27, 2017 he has been a member of the strategic committee. He was a member of the Control and Risk Committee from June 1, to July 27, 2017. From 1995 to 1998, he was a lawyer at the Siméon & Associés in Paris and, from 1999 to 2000, he was a member of Weil Gotshal & Manges LLP in New York. From July 2000 to August 2005, he was a special adviser to the general council and a member of the Vivendi Universal legal department before being appointed senior vice president and head of the Vivendi legal department in August 2005. In June 2014, he was appointed General Counsel and Company Secretary of the Vivendi group. In September 2015 he became General Counsel of Canal + Group. He was appointed to the board of directors of Vivendi on November 10, 2015. He is a lecturer at the Institut d Études Politiques de Paris. He currently holds various positions within the Vivendi Group: Member of the Board of Directors of Vivendi; Member of the Supervisory Board of Groupe Canal +; Member of the Supervisory Board of Studiocanal; Member of the Supervisory Board of Universal Music France (SAS); Director of Dailymotion; Director of Wengo; Director of the Canal Olympia; Director of L Olympia; Chairman of SIG 116 SAS, SIG 117 SAS, SIG 119 SAS and SIG 120 SAS; Director of Vivendi Holding I LLC. (United States).

**Dario Frigerio:** Dario Frigerio was born in Monza on June 24, 1962. He graduated with honors in 1986 with a degree in Macroeconomics from Milan's Bocconi University. He began his professional career at Credito Italiano as a financial analyst. From May 4, 2017, he is independent director of TIM and since June 1, 2017 he is a member of the Strategic Committee. In 1991 he took the responsibility of the proprietary portfolio of the bank, reporting directly to the CFO. In 1996 he became Chief Investment Officer at the asset management arm of Unicredit Group responsible for the European strategy, based in Ireland. In 2001, after the acquisition of the Pioneer group in Boston, he became Chief Executive Officer of Pioneer Global Asset Management, an asset management company operating in over 15 different countries with AUM in excess of 100 billion. In 2004, after the new restructuring of the Unicredit group, he was also put in charge of the Wealth Management Division and was appointed Deputy General Manager of the Unicredit group and Chief Executive Officer of Unicredit Private Banking. He became a member of the Group Executive committee, reporting directly to the global CEO. After the acquisition of the German Group HVB and the Austrian Group Bank Austria in 2006 and Capitalia in 2007, he became responsible for the Group's entire international wealth management, operating in over 25 countries worldwide. As Deputy General Manager of the Unicredit group, managing director of Pioneer and of Unicredit Private Banking, he joined and chair a great number of Boards as executive director and member of control and executive committees. He has been president and vice-president of Italian and foreign banks and investment management companies (including Fineco, Xelion and Dat) and has been a member of the supervisory board of HVB in Germany and Bank Austria in Austria, both listed. He was regularly invited as first line manager to the board meetings of the Unicredit group from 2004 to 2008. He left the Group in 2010, and after the collaboration with the Boston Consulting Group, he was appointed senior advisor in Citibank

Group for the wealth management and asset management sectors, covering Europe, Middle East and Africa. From 2011 to 2013, he was Chief Executive Officer of Prelios SGR, domestic leader in real estate asset management at the time. Currently he is Vice President of Fondazione Fiera Milano, which owns the majority of Fiera Milano S.p.A. He is also independent director of listed and unlisted companies, chairman of board committees and Senior Advisor in Asset Management and Wealth Management practices for Institutional Company and Foundations. He is partner in private banking and private insurance companies.

**Félicité Herzog:** Félicité Herzog was born in Boulogne-Billancourt (France) in 1968. She has been an independent member of the TIM Board of Directors since December 2015, and since February 2016, she has been

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a member of the control and risk committees. She graduated from the Institut d Etudes Politiques in Paris and INSEAD (MBA program). In 1992, she joined Lazard Frères in Paris, where she was a member of the government consulting team for Gabon and Russia, advising debt restructuring issues. She continued her career in the mergers and acquisitions department of Lazard Frères in New York until 1996, when she joined the merger and acquisition team of JP Morgan in London. In 1997, she moved to Apax Ventures, a private equity fund in London, where she specialized in telecommunications investments in Europe. In 2000, she was hired by Madison Dearborn Partners, a US private equity fund in London, where she oversaw investments of the same type. In 2002, she became Vice President, Mergers and Acquisitions of the Publicis Group, overseeing and implementing mergers, divestitures and acquisitions in advertising and marketing services. In 2007 he joined Areva as senior vice president of development, in charge of organizational consulting, optimization of the structures, cost control and optimization of the product range, before being appointed Deputy CEO of Technicatome, a subsidiary of Areva that produces reactors nuclear propulsion systems. Ms. Herzog is president and chief executive officer of Apremont Conseil, a strategic consulting firm and has worked as a senior consultant for Ondra Partners from March 2015 to March 2016. She is also the author of fiction and non-fiction publications in France.

**Anna Jones:** Anna Jones was born in Harrogate on March 27, 1975. She holds a degree in International Business Management from the University of Newcastle Upon Tyne (United Kingdom), and is a graduate of the Ecole Supérieure de commerce of Marseille (France). From May 4, 2017, she has been an independent director of TIM and since June 1, 2017 she has been a member of the Nomination and Remuneration Committee; on June 15, 2017 she was appointed Chairwoman of the Nomination and Remuneration Committee. Mrs. Jones began her career in 1997 as an Account Executive at Ketchum, a global public relations agency. In 1999, she became an International Product Manager at Acclaim UK, a video games publisher. From 2000 to 2005 she served as a Marketing Manager at Emap, one of the largest and most diversified publishers in the UK at that time. In 2005, she joined Hachette Filipacchi UK Ltd as Marketing Director, before being appointed Digital and Strategy Director and a member of the Board of Directors of Hachette Filipacchi UK in 2008. In 2011, following Hearst Corp.'s acquisition of Hachette Filipacchi Media, Mrs. Jones was appointed Chief Operating Officer of Hearst Magazines UK, working to integrate the Hachette and Hearst businesses in order to transform the company into a modern, brand and digital-centric, diversified media company. In this position, she had oversight over all publishing directors and editors, the marketing department and brand P&L's. From 2014 to February 2017, she served as Chief Executive Officer of Hearst Magazines UK, as well as the Chairman of Comag, the U.K.'s most innovative third-party marketing and distribution company for newsstand products. Then, in October 2016, she co-founded AllBright, a ground-breaking funding and support platform dedicated to sourcing, nurturing and backing the most outstanding female-led companies in the UK. In January 2017, she co-founded ShareStyle, a digital marketplace aggregating and curating life and style services from a range of creative talent, where she serves as its Executive Chairman. She is a member of the Board of Directors of the Creative Industries Federation (a national membership organization for the public arts, cultural education and creative industries).

**Marella Moretti:** Marella Moretti was born in Turin, Italy, on November 4, 1965. She graduated from the Amministrazione Aziendale Business School of the University of Turin, specializing in Finance. From May 4, 2017 she is independent director of Tim and since July 27, 2017 she has been a member of the Control and Risk Committee. Since 2005, she has been Chief Financial Officer of Fiat Chrysler Finance et Services in Paris. She also currently holds the following other positions within the Fiat Chrysler Automobiles and CNH Industrial groups in France. Since 2009, she has been Managing Director (Directeur General délégué) 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. Since 2011, she has served as a member of the Board of Directors of Fiat Chrysler Finance Europe. She started her career in 1988 as International Corporate Finance Analyst at Fiat S.p.A. in Italy. From 1991 to 1996 she worked as head of Financial Planning and Control at Fiat France, in Paris. She 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). She has also served from 2011 to 2014 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 (CAC 40 and Euro Stoxx 50 indices). 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).

**Hervé Philippe:** Hervé Philippe was born in Cheillè (France) in 1958. Since December 2015 he has been a Director of the Board of TIM S.p.A. Since June 1, 2017 he is a member of the Nomination and remuneration



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Committee. He is a graduate of the Institut d Études Politiques de Paris and holds a degree in economic sciences. He began his career with Crédit National in 1982 as account manager for business financing in the Île-de-France region. In 1989, he joined the French market authority, the Commission des opérations de bourse (COB) as manager for the sector of French companies listed for trading. From 1992 to 1998, he served as Head of the Transactions and Financial Information Department. In 1998, he joined the Sagem Group, where he held the positions of Director of Legal and Administrative Affairs at Sagem SA (1998-2000), Chief Administrative and Financial Officer of Sfim (1999-2000), and Director of Communication at Sagem SA (2000-2001). In 2001, he assumed the position of Chief Financial Officer and became a member of the Sagem SA Management Board in 2003. Hervé Philippe was appointed Chief Financial Officer of the Havas Group in November 2005 and, in May 2010, was named deputy Chief Executive Officer (Directeur Général Délégué) until December 31, 2013. He has served as Vivendi's Chief Financial Officer since January 1, 2014. Since June 24, 2014, he has been a member of the Management Board. His current positions within the Vivendi group include: Member of the Management Board of Vivendi, Vice-Chairman of the Supervisory Board of Canal+ Group, Member of the Supervisory Board of StudioCanal, President of the Compagnie Financière du 42 Avenue De Friedland (SAS), Director and member of the Audit Committee of Dailymotion, Member of the Supervisory Board of Universal Music France and permanent representative of Financière de Longchamp on the Board of Directors of Havas Group. He is also a Director of Harvest, Sifraba and Jean Bal.

**Danilo Vivarelli:** Danilo Vivarelli was born in La Spezia on June 6, 1964. From May 4, 2017 he has been an independent director of TIM and since June 1, 2017 he has been a member of the Nomination and Remuneration Committee. Since September 2015, he has been General Manager of Call & Call, a company active in the Business Process Outsourcing market, with 2,500 employees. He has been working for 24 years in the Telecommunications market with a first experience in Marconi (1991-1997) where he held several technical and commercial roles. He then participated in the development of Omnitel Pronto Italia (today Vodafone) from 1997 to 2000, serving in positions of responsibility within the Strategic Management and the Consumer Business Unit. Starting in 2000, he participated in the start-up of Fastweb, a company where he worked for almost 15 years, where he oversaw on-demand video activities as CEO of e.BisMedia, a Group Company that provided video on demand services and as member of Rai Click BoD (Rai Click was the joint venture between Fastweb and Rai). In connection with the national expansion of Fastweb, he was Director of Northeast (2003-2006) dealing with Sales and Operations on the territory and subsequently he was named Chief Strategy Officer (from 2007 to 2010), joining the Executive Committee of the company. In the most recent role, until the end of 2014, he was Head of the Consumer and Micro Business Unit, coordinating Marketing, Sales, Communication and Customer Operations. From 2006 to 2015, he was also an Independent Director of Dada, a listed company on the Milan Stock Exchange.

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On March 6, 2018, the organizational structure of the TIM Group was redesigned. The new organizational model responds, in particular, to the following aims:

- monitoring the overall performance of the Group and specific businesses;
- strengthening the necessary operational synergies between the Functions involved in the different innovation, technological, business and support processes.

As of April 9, 2018 the executive officers of TIM and their respective positions were as follows:

<b>Name</b>	<b>Age</b>	<b>Position</b>	<b>Appointed</b>
<b>Directors:</b>			
Arnaud Roy de Puyfontaine	54	Executive Chairman	2017
Amos Genish	57	Chief Executive Officer/General Manager	2017
<b>Managers:</b>			
Amos Genish	57	Ad interim Chief Technology Officer(1)	2018
Amos Genish	57	Ad interim Chief Commercial Officer(1)(5)	2018
Agostino Nuzzolo	50	Head of Legal, Regulatory and Tax(1)	2018
Piergiorgio Peluso	50	Chief Financial Officer and Head of Administration Finance and Control and Chief Transformation Officer(2)	2012
Stefano Siragusa	42	Chief TIM Infrastructures Office(3)	2018
Michel Sibony	51	Head of Procurement Unit and Real Estate(1)	2018
Mario Di Mauro	46	Head of Strategy Innovation and Quality(1)	2018
Riccardo Meloni	58	Head of Human Resources and Organizational Development(4)	2018
Stefano De Angelis	50	CEO Tim Participacoes	2016

(1) Since March 6, 2018.

(2) Since December 18, 2017 he has been Chief Transformation Officer of TIM.

(3) Since March 12, 2018 he was appointed Head of the Chief TIM Infrastructures Office subsequently renamed Chief Wholesale Infrastructures Network & System Office.

(4) Since March 16, 2018.

(5) On March 21 2018, the Company announced with a press release that, beginning in mid-April, Pietro Scott Jovane will be the Chief Commercial Officer, reporting directly to the Chief Executive Officer, Amos Genish.

The following are the selected biographical data of the executive officers, other than Directors (for the biographical data of Mr. Giuseppe Recchi, Mr. Arnaud Roy de Puyfontaine and Mr. Amos Genish please see above under 6.1 Directors ):

**Stefano De Angelis:** Mr. De Angelis was born in Rome, in 1967. Since May 2016, he has been Chief Executive Officer at TIM Participações S.A. He graduated from the Università Studi La Sapienza in Rome with a degree in Economics and Business. Mr. De Angelis obtained an MBA in Business Administration at the School of Management of the University of Turin. In 1996, Mr. De Angelis began working as a financial controller for Fiat S.p.A. From 1997 to 2001, Mr. De Angelis was Business Controller at TIM. During his years with TIM he has had increasingly more responsibilities. From July 2004 to August 2007, he was Director of Administration, Finance and Control and an Investor Relations Officer at TIM Participações S.A. Since September 2007 until March 2009, has was Director of Planning and Control for Domestic & Int'l Business Units at TIM S.p.A. He was Director of Administration, Planning and Control at TIM S.p.A. from March 2009 until January 2013. From January 2013 to September 2014, Mr. De Angelis held the position of Chief Executive Officer at Telecom Argentina S.A. From August 2014 to May 2016, he was a Director of the Consumer and Multimedia Entertainment Division at TIM S.p.A. In 2000, he was appointed Board Officer at Stream S.p.A. and, from 2001 to 2002, he served as Chief Financial Officer of Telecom Italia Media S.p.A. He was Director of Planning and Control at TIM S.p.A. from 2002 to 2004.

**Mario Di Mauro:** Mr. Di Mauro was born in Chieti, in 1971. Since February 2018, Mr. Di Mauro has been Executive Vice President and Chief Strategy, Innovation & Customer Experience Officer, responsible for Group Strategy, Business Development (acquisition and disposal of strategic assets), Strategic partnerships,

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Innovation, Management of Group's Venture Capital initiatives and Start up Program, Customer Experience Management. Mr. Di Mauro Graduated in Economics with a first class honors degree (110 with laude) and has an MBA in Business Administration. From 1998 to 2001, he was Latin America Senior analyst Controlling Activities of Telecom Italia Mobile, International Affairs. From 2001 to 2005, he was *Head of Planning & Control & Investment Projects TI Latam Activities* Telecom Italia Latin America. From 2006 to January 2008, he was Head of Business Positioning & Competitive Analysis Telecom Italia Strategic Marketing. From February 2008 to 2010, he was Head of International Planning & Control Telecom Italia Administration Finance and Control. From 2010 to 2013 he was Head of Business Valuation Telecom Italia Mergers & Acquisitions. From June 2014 to September 2016, he was Executive Vice President and Chief Strategy & Innovation Officer responsible Group Strategy, Business Innovation Roadmap and Labs, Business Development, Strategic partnerships, Big Data Transformation Project, Business Positioning (Definition of Company's Portfolio) of Telecom Italia. From September 2016 to February 2018, he was Executive Vice President and Chief Strategy Officer responsible for Group Strategy, Business Development (acquisition and disposal of strategic assets), Strategic partnerships, Business Positioning, Management of Group's Venture Capital initiatives and Start up Program Telecom Italia. Mr. Di Mauro is Chief Executive Officer at TIM Ventures (TIM Group's vehicle aimed at scouting and funding new innovative start-ups; is Board Member at TIM Participações (listed company at Bovespa and Nyse), Candidate Board Member at INWIT (Tower Company, Listed in the Italian Stock Market) and Member of the Chief Strategy Officer Group at GSMA.

**Riccardo Meloni:** Mr. Meloni was born in Chieti, in 1960. He has been Head of TIM's Human Resources and Organizational since March 2018. Mr. Meloni holds a degree in law from the University of Perugia. Mr. Meloni completed a Finmeccanica Executive Leadership Program at Imperial College, London. From 2006 to 2008, has was a Visiting Professor of Advanced Organisational Systems in the Economics Master Degree Course at LUISS. He has collaborated with LUISS and other Italian and international Universities.

From 1989 to 1999, Mr. Meloni was Head of HR & Organisation of the TELECOM ITALIA Group. From 1999 to 2001, he was Vice President Organisational Development of ENEL Group WIND S.p.A. From July 2001 until December 2007, he was Head of HRO Corporate of Finmeccanica Group. From 2008 to 2018, he was Head of HR & Organisation of Leonardo Group (formerly Finmeccanica).

**Agostino Nuzzolo:** Mr. Nuzzolo was born in Caserta, in 1968. He has been Head of TIM's Legal Affairs 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 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,

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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.

**Michel Sibony:** Mr. Sibony was born in Sarcelles (France) in 1966. After receiving a degree in accounting and spending 13 years in the industry, Michel Sibony joined the Bolloré Group at the beginning of 2002. Michel Sibony holds several functions within the Bolloré Group, Havas Group, and, since 2016 in the Vivendi Group where he was recently appointed Chief Value Officer. Involved in all the new projects of the Group, his role covers the full range of expertise and investment.

**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 with the allegation, the effect of decreasing the net asset value of Imco. The trial in this matter is scheduled to begin in December 2018.

**Table of Contents****Item 6. Directors, Senior Management and Employees****Board Of Auditors****6.3 BOARD OF AUDITORS**

On May 20, 2015, the Shareholders Meeting appointed the present Statutory Board of Auditors, that will remain in office until approval of the 2017 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 9, 2018.

<b>Name</b>	<b>Position</b>	<b>Appointed</b>
Roberto CAPONE(1)	Chairman	2015
Vincenzo CARIELLO(1)	Acting Auditor	2015
Gabriella CHERSICLA(2)	Acting Auditor	2017
Gianluca PONZELLINI	Acting Auditor	2015
Ugo ROCK	Acting Auditor	2015
Francesco Di CARLO	Alternate Auditor	2015
Piera VITALI(1)	Alternate Auditor	2015
Riccardo SCHIOPPO(1)	Alternate Auditor	2015

(1) Elected by minority shareholders.

(2) On September 11, 2017 Gabriella Chersicla, replaced Paola Maiorana who resigned from the office of acting auditor.

With the approval of the 2017 financial statements, the mandate of the Board of Statutory Auditors appointed in May 2015 ends; the Shareholders Meeting called for April 24, 2018 will proceed with the appointment of the new Board of Statutory Auditors.

The positions held by the members of the Board of Statutory Auditors in other listed companies are shown below:

Roberto Capone	Chairman of the Board of Auditors of Bonifiche Ferraresi.
Vincenzo Cariello	Member of the Board of Director of OVS S.p.A.
Gabriella Chersicla	Chairman of the Board of Director Parmalat S.p.A.
	Member of the Board of Director of Maire Tecnimont
	Statutory Auditors of RCS Mediagroup S.p.A.
	Statutory Auditors of Eprice S.p.A.



Gianluca Ponzellini

Statutory Auditors of De Longhi S.p.A.

Statutory Auditors of Carrefour S.p.A.

As of April 9, 2018, two slates of candidates will be presented to the Shareholders Meeting of April 24, 2018 for the appointment to the Board of Statutory Auditors.

The slate proposed by Vivendi S.A. is comprised of:

Candidates for Acting Auditor

1. Marco Fazzini
2. Francesco Schiavone Panni
3. Giulia De Martino
4. Pietro Mastrapasqua
5. Mara Vanzetta

Candidates for Alternate Auditor

1. Antonia Coppola,

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**Item 6. Directors, Senior Management and Employees**

**Board Of Auditors**

2. Andrea Balelli,

3. Maria Francesca Talamonti,

4. Silvio Tirdi,

The slate proposed by a group of asset management companies and international investors is comprised of:

Candidates for Acting Auditor

1. Roberto Capone

2. Anna Doro

Candidates for Alternate Auditor

1. Franco Dalla Sega

2. Laura Fiordelisi

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 .

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**Item 6. Directors, Senior Management and Employees**

**External Auditors**

**6.4 EXTERNAL AUDITORS**

The TIM Shareholders Meeting, held on April 29, 2010, appointed PricewaterhouseCoopers S.p.A. as TIM's independent auditors for the nine-year period 2010–2018. PricewaterhouseCoopers is also 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, since January 1, 2017, by a European regulation. Pursuant to such decrees and regulation, with the audit of TIM's 2018 separate and consolidated financial statements the PricewaterhouseCoopers audit mandate will expire and cannot be renewed unless 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 the TIM Board of Auditors, the selection process for the new Group Sole Auditor for the nine-year period from 2019 to 2027. This anticipation was necessary in order to comply with the principle of independence and in particular the prohibition, for public interest entities (EIP) and, where applicable, for the related parent company and subsidiaries, provided for by art. 5 of the European Regulation n. 537/2014, to receive some prohibited services from the New Group Sole Auditor (including network) in the 12 months preceding the start of the period under audit (cooling-in period).

As a result, the Annual Shareholders Meeting of April 24, 2018 will be 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.

**Table of Contents****Item 6. Directors, Senior Management and Employees****Employees****6.5 EMPLOYEES****6.5.1 EMPLOYEES AND CHANGES IN THE TIM GROUP**

The number of Group employees at December 31, 2017 and 2016 was the following:

	As of December 31,		
	2017	2016	Changes
	(units)		
Employees Italy	49,689	51,122	(1,433)
Employees Foreign	9,740	10,103	(363)
<b>Total Employees at payroll</b>	<b>59,429</b>	<b>61,225</b>	<b>(1,796)</b>
Employees with temporary work contracts		4	(4)
<b>Total</b>	<b>59,429</b>	<b>61,229</b>	<b>(1,800)</b>

The decrease in workforce (excluding employees with temporary work contracts) of 1,796 units compared to December 31, 2016, is the result of the workforce turnover in 2017. In detail:

	Hirings	Terminations	Changes
	(units)		
Domestic	656	2,081	(1,425)
Brazil	2,086	2,427	(341)
Other Operations	3	33	(30)
<b>Turnover</b>	<b>2,745</b>	<b>4,541</b>	<b>(1,796)</b>

**TIM S.p.A.**

	As of December 31,		
	2017	2016	Changes
	(units)		
Personnel on payroll	44,281	45,907	(1,626)

**Tim Brasil group**

	<b>As of December 31,</b>		
	<b>2017</b>	<b>2016</b>	<b>Changes</b>
		<b>(units)</b>	
Tim Brasil group	9,508	9,849	(341)

## **6.5.2 INDUSTRIAL RELATIONS**

### **TIM S.p.A.**

In 2017, in accordance with the Industrial Relations model shaped by seeking dialogue and a comparison of ideas, and in compliance with contractual structures, information and discussion sessions with trade unions continued both on a national and local level. Interaction was based on respect for roles and related responsibilities, and the compliance with and enforceability of the rules and contracts.

At the national level, TIM has, on several occasions, outlined the strategic positioning of the Company in relation to the main economic and production indicators and the consequent need to identify measures aimed at supporting the recovery of competitiveness, profitability and at improving the quality of services, in order to protect employment, people, and defend the Company scope.

In this context, the Company issued a Company Regulation which innovates and modernizes some fundamental aspects of the employment relationship, including, inter alia, specific individual incentive measures for technical staff with respect to remuneration.

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The Company and the trade unions reached an understanding that determines the structure of the 2017/2019 performance bonus for companies of the TIM Group.

The Bonus takes a new approach: it provides for equal incentive system for all, from managers to technical personnel, and they are based on the results achieved with respect to the goals set. The agreement, which positively concludes the negotiations initiated with the trade unions, provides for the performance bonus to be comprised of:

- a basic bonus that uses the group EBITDA as an indicator;
- a production bonus that uses the revenues from group services net of product revenues as an indicator;
- an improvement bonus that uses the Customer Satisfaction Index as an indicator; and
- a department bonus linked to the departmental targets.

The objectives, changed by managerial incentive systems, recognize the contribution of all workers to the achievement of the forecast economic and production results.

The average value of the bonus for TIM was also defined, correlated and commensurate to the achievement of the goals set. The payout, made annually for the duration of the agreement, will involve all workers, including those with apprenticeship and fixed-term contracts, but the bonus will be awarded upon achievement of, first of all, the measure set for the Group EBITDA indicator.

The parties have also provided for the Welfare option, according to which people may choose whether to receive all or a part of the bonus in welfare services, benefiting from full tax relief. The list of services includes, inter alia, daycare centers, taxes and schools books, elderly care, healthcare costs, pension funds, loans, shopping vouchers, sports and free time which are only a part of the welfare capital, in which TIM invests a total of over 100 million euros each year.

A specific joint consultancy body has been set up to manage the agreement, which will be notified of the goals each year, derived from the budget process, in accordance with the Strategic Plan; this body is tasked, inter alia, with analyzing the types of services accessible through welfare.

With respect to the trend reversal of the Company's main economic and profit indicators, recorded in the second half of 2016, in 2017 TIM paid its employees a contribution made on the basis of overall efficiency recovery and improvement of the Company's economic performance. In this sense TIM's people were paid a One-off Bonus, diversified according to their grade. Likewise, the disbursement also concerned staff from other companies in the Group.

At the end of the discussions on agile working started by TIM with the Trade Union Organizations, an understanding was reached, with the aim of partaking in the spread of agile working at the Company, already introduced experimentally with a first pilot phase in 2016-2017.

The understanding on agile working reached with the Trade Union Organizations in July 2017 marks another step on the road to TIM's digital transformation and represents an additional undertaking by the Parties to achieve the goals of improving productivity, promoting social, economic and environmental sustainability and encouraging work-life balance, with particular attention to family care needs.

To manage the agreement, the Parties have set up a system of quarterly checks to be carried out nationwide on the progress of the experiment, the equipment available, the organizational areas involved and the monitoring of the hours of absence reduction productivity indicator identified by the Parties. Local Trade Union Organizations will also be sent a periodic information notice on the progress of the experiment in the area of reference.

In September 2017, the new agile working experiment was therefore launched on a voluntary basis and will run until December 31, 2018; the people at TIM's who perform compatible activities will have the opportunity to work in agile working mode at another Company office and/or non-Company establishment indicated by the employee, in the manner and time indicated by the Company, in compliance with the agreement defined.

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In the context of the procedure under law 223/91 launched by TIM in July 2017 with respect to 382 workers, the Company and the trade unions, during the various joint examination sessions, further explored the reasons indicated by the Company. The discussion, aimed at finding the most appropriate method to manage the redundancies, concluded positively with the agreement signed on November 8, 2017; the Parties agreed on the use of collective dismissal to reduce staff numbers, identifying a maximum of 340 workers and, in accordance with current legislation, the non-opposition criteria to execute the dismissals. The agreement includes specific economic measures to accompany termination of the employment relationship.

In November 2017, TIM and the Trade Union Organizations SLC-CGIL, FISTel-CISL and UILCom-UIL, as the parties that established the recreational club for employees of the TIM Group (CRALT), signed an agreement that defined the new structure of the Club.

The agreement reached supersedes the previous notifications of withdrawal from the Club and cancellation of the agreements, positively concluding the phase of discussions between the Parties by identifying innovative and economically sustainable solutions for reviewing the structure and management charges of the Club which ensure, in terms of efficiency and sustainability, the operational continuity of CRALT.

**In Brazil**

The Company held two meetings with the two national federations (Fenattel and Fitratelp), which together represent 27 national unions, to negotiate the renewal of the 2017 PPR Participation Agreement. The Collective Labour Agreement was also negotiated: while negotiations with the federation representing 19 states were concluded, negotiations with the other federation representing 8 states are still underway, due to the failure of employees to reach agreement; hence talks are now in the third round to establish the conditions of the addendum to the collective bargaining agreement for 2017/2018.



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**6. Directors, Senior Management and Employees Compensation Of Directors, Officers And Members of The Board of Aud**

**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, 2017 set the maximum total annual remuneration for the Board of Directors, which will remain in office for a three-year term, until the approval of the 2017 financial statements, at up to 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 amount is distributed as follows (gross amounts on a yearly basis):

- 110,000 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 Chairman of each Control and Risk Committee and Nomination and Remuneration Committee;
- an additional 45,000 euros to be paid to Director Calvosa, who is assigned the role of link between the Board and the control functions which report directly to the Board;
- an additional 25,000 euros to be paid to each member of the Strategic Committee; and
- an additional 15,000 euros to be paid to the Chairman of Strategic Committee.

The total compensation paid by TIM and by the TIM Group subsidiaries in 2017 to the members of the Board of Directors of TIM was 28.1 million euros.

**CHAIRMAN**

**January 1, 2017 May 4, 2017**

The office of Executive Chairman has been held by Giuseppe Recchi since the start of the year, and until renewal of the body (Shareholders Meeting on May 4, 2017) by Giuseppe Recchi. In that period his remuneration was represented solely by a fixed emolument of 700,000 euros per year.

**May 5, 2017 June 1, 2017**

After the renewal, on May 5, 2017, the office of Executive Chairman was assigned again to Giuseppe Recchi, who retained it until June 1, 2017, with a temporary remuneration based on a fixed gross annual remuneration of 900,000 euros (and exclusion from the remuneration payable to him as a Director and as a member of the Strategy Committee).

**June 1, 2017 December 31, 2017**

From the date of his appointment (June 1, 2017), the remuneration package of the new serving Executive Chairman, Arnaud Roy de Puyfontaine, has been represented by an emolument pursuant to art. 2389, subsection 3, of the Italian Civil Code, and is composed of:

- a fixed part totalling 900,000 euros per annum, gross; and
- a variable part in the form of an MBO determined, at target, to be 900,000 euros per annum, gross, with exclusion of the remuneration payable to him as a member of the Board of Directors and a member of the Strategy Committee. The variable remuneration is linked to annual performance objectives decided by the Board, with a range of between 50% and 150% depending on the level of achievement of the target assigned.

**CHIEF EXECUTIVE OFFICER**

**January 1, 2017 July 28, 2017**

From January 1 to June 28, 2017, the role of Chief Executive Officer was held by Flavio Cattaneo, confirmed by the Board of Directors on 5 May 2017 in the office he already held before the renewal of the board.

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In that period, his remuneration as the chief executive officer of the Company was represented by gross annual remuneration of 1,400,000 euros, to which was added a variable component in the form of an MBO, as remuneration pursuant to art. 2389, subsection 3, of the Italian Civil Code, totalling, at target, 1,400,000 euros per annum, gross. Mr Cattaneo did not receive any remuneration in his capacity as Director and member of the Strategy Committee.

On July 24, 2017, the Board of Directors, by majority vote, approved an agreement for the termination of Flavio Cattaneo's appointment as Chief Executive Officer, with effect from July 28, 2017, and of his employment as General Manager, with effect from July 31, 2017.

The agreement prescribed that Mr Cattaneo would be paid the sum of 22.9 million euros, gross, as settlement for remuneration due to him based on his contract with the Company, considering, in particular, the Special Award and the MBO, in relation to the service he had already rendered as Chief Executive Officer and the value found to have been added, based on the information available at that time. The agreement also prescribed that he should be paid the sum of 2.1 million euros, gross, as fee for a non-competition, non-solicitation and non-reversal agreement for one year, applicable to TIM's principal competitors in Italy and in Brazil; the assignment to him of some company securities was also agreed.

For the termination of his employment, he also received the other accessory and severance payments due to him by law and pursuant to the applicable collective agreement (severance, holiday pay, thirteenth month bonus) and a lump sum to neutralise the costs deriving from the transfer of his company car.

At the time of his resignation, Mr Cattaneo held 1,500,000 ordinary shares of the Company and 893,617 stock options, assigned as a result of his achievement of the objectives of the 2014/2016 Stock Option Plan, maturing in 24/3/2020, with a strike price of 0.99 euros per share.

**September 28, 2017 December 31, 2017**

In its meeting on September 28, 2017, the Board of Directors of the Company co-opted Amos Genish, appointing him Amministratore Delegato (Chief Executive Officer) and at the same time engaged him as a senior executive with a permanent contract of employment, assigning him the office of General Manager.

The gross remuneration for the employment was 1,000,000 per annum, gross, while a fixed remuneration of 400,000 euros per annum, gross, was awarded as remuneration pursuant to art. 2389, subsection 3, of the Italian Civil Code, with exclusion of remuneration for serving as a Director and for membership of the Strategy Committee.

As further remuneration pursuant to art. 2389, subsection 3, of the Italian Civil Code, an MBO with a target amount of 1,400,000 euros gross was also paid, re-proportioned pro-rata temporis, based on the complete number of months worked.

The variable remuneration is linked to annual performance objectives decided by the Board, with a range of between 50% and 150% depending on the level of achievement of the target assigned.

**DEPUTY CHAIRMAN****January 1, 2017 June 1, 2017**

From January 1 to June 1, 2017, the role of Deputy Chairman of the Board of Directors was held by Arnaud Roy de Puyfontaine, confirmed by the Board of Directors on May 5, 2017 in the office he already held before the renewal of the board.

During that period, the remuneration (in addition to the remuneration for serving as a Director and/or membership of Committees) was 45,000 euros per annum, gross. No variable remuneration was payable.

**June 1, 2017 September 28, 2017**

On June 1, 2017, Giuseppe Recchi took the role of Deputy Chairman of the Board of Directors, renouncing the role of Chairman.

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**6. Directors, Senior Management and Employees Compensation Of Directors, Officers And Members of The Board of Aud**

The remuneration (in addition to the remuneration for serving as a Director and/or membership of Committees) was equal to 45,000 euros per annum, gross. No variable remuneration was payable for this role.

Since July 28, 2017, pending the appointment of the new Chief Executive Officer, he was temporarily assigned organisational responsibility for the Security Department and responsibility for the governance of the wholly owned subsidiary Telecom Italia Sparkle S.p.A.

**September 28, 2017 December 31, 2017**

With effect from September 28, 2017, after the assignment to the Deputy Chairman to act as the deputy of the Executive Chairman, and confirmation of the powers he had been exercising on a temporary basis since July 28, the Deputy Chairman, Giuseppe Recchi, was granted a further additional remuneration of 10,000 euros per month, gross, to apply until his pay package is comprehensively reviewed, which will be done as soon as the governance solution required to comply with the prescriptions imposed pursuant to the Golden Power law has been implemented.

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The following table lists the Directors who served during 2017 and their respective compensation as of December 31, 2017, 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):

Name and surname	Position	Period for which the position was held	Expiry of term of office (month/year)	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
				Fixed remuneration	Involvement remuneration	Variable remuneration	Non-monetary benefits	Other remuneration	Total remuneration	Fair value or termination equity of office	
Giuseppe Recchi(1)	Executive Chairman	1/1 5/31/2017	Dec-19	376	10			36	32	454	Compensation for loss of Fair office Value or termination equity of office
	Deputy Executive	09/28	Dec-19								

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Chairman 12/31/2017

Arnaud Roy de Puyfontaine(2)	Chief Executive Officer	06/01 12/31/2017	Dec-19	525		525
Amos Genish(3)	Chief Executive Officer	09/28 12/31/2017	Dec-19	360	1	361
	General Manager					
Arnaud Roy de Puyfontaine(4)	Deputy Chairman	01/01 05/31/2017	Dec-19	65	26	91
Giuseppe Recchi(5)	Deputy Chairman	06/01 09/27/2017	Dec-19	52	8	60
Camilla Antonini(6)	Director	5/5 12/31/2017	Dec-19	72	21	93
Franco Bernabè(7)	Director	5/5 12/31/2017	Dec-19	72	15	87
Ferruccio Borsani(8)	Director	5/5 12/31/2017	Dec-19	72	23	95
Lucia Calvosa(9)	Director	1/1 12/31/2017	Dec-19	146	59	205
Francesca Cornelli(10)	Director	1/1 12/31/2017	Dec-19	110	42	152
Frédéric Crépin(11)	Director	5/5 12/31/2017	Dec-19	72	43	115
Dario Frigerio(12)	Director	5/5 12/31/2017	Dec-19	72	15	87
Félicité Herzog(13)	Director	1/1 12/31/2017	Dec-19	110	42	152



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## 6. Directors, Senior Management and Employees Compensation Of Directors, Officers And Members of The Board of Aud

Name and surname	Position	Period for which the position was held	Expiry of term of office (month/year)	Remuneration for Fixed involvement commitments				Other benefits generated	Total remuneration	Compensation for loss of office or termination of employment
				Column 1	Column 2	Column 3	Column 4			
Anna Jones(14)	Director	5/5 12/31/2017	Dec-19	72	34			106		
Marella Moretti(15)	Director	5/5 12/31/2017	Dec-19	72	26			98		
Hervé Philippe(16)	Director	1/1 12/31/2017	Dec-19	110	23			133		
Danilo Vivarelli(17)	Director	5/5 12/31/2017	Dec-19	72	23			95		
Flavio Cattaneo(18)	Chief Executive Officer General Manager	01/01 07/27/2017 01/01 07/31/2017	Dec-19	910		53	48	1,011	25,000	
Tarak Ben Ammar(19)	Director	1/1 5/4/2017	Dec-16	38				38		
Davide Benello(20)	Director	1/1 5/4/2017	Dec-16	38	30			68		
Laura Cioli(21)	Director	1/1 5/4/2017	Dec-16	38	24			62		
Jean Paul Fitoussi(22)	Director	1/1 5/4/2017	Dec-16	38				38		



Giorgina Gallo(23)	Director	1/1 5/4/2017	Dec-16	38	15		53
Denise Kingsmill(24)	Director	1/1 5/4/2017	Dec-16	38			38
Luca Marzotto(25)	Director	1/1 5/4/2017	Dec-16	38	14		52
Stephane Roussel(26)	Director	1/1 5/4/2017	Dec-16	38	14		52
Giorgio Valerio(27)	Director	1/1 5/4/2017	Dec-16	38	29		67
<b>Total</b>				<b>3,682</b>	<b>536</b>	<b>53</b>	<b>85 32 4,388 25,000</b>

**(1) Giuseppe Recchi Executive Chairman of the Board of Directors Deputy Executive Chairman of the Board of Directors**

col. 1 This amount includes the fixed remuneration pursuant to article 2389, subsection 3, of the Italian Civil Code received for serving as Executive Chairman (242,000 euros) for the period 01/01 05/04/2017, and as *pro-tempore* Deputy Chairman (64,000 euros) for the period 05/05-05/31/2017, the fixed remuneration pursuant to art. 2389 subsection 3 of the Italian Civil Code, for serving as Deputy Executive Chairman (42,000 euros) and the remuneration pursuant to art. 2389 subsection 1 of the Italian Civil Code for serving as a member of the Board of Directors (28,000 euros), both for the period 09/28 12/31/2017;

col. 2 The amount refers to remuneration pursuant to art. 2389, subsection 1 of the Italian Civil Code for serving as Chairman and Member of the Strategy Committee for the period 09/28 12/31/2017.

col. 5 The amount refers to the remuneration pursuant to art. 2389, subsection 1 of the Italian Civil Code for serving as a Director of Inwit S.p.A. for the period 04/20 12/31/2017.

**(2) Arnaud Roy de Puyfontaine Executive Chairman of the Board of Directors**

col. 1 The amount refers to the remuneration pursuant to article 2389, subsection 3, of the Italian Civil Code received for serving as Executive Chairman for the period 06/01 12/31/2017;

col. 3 The bonus for the financial year 2017, for objectives achieved in the year itself, was waived by the Executive Chairman.

**(3) Amos Genish Chief Executive Officer General Manager**

col. 1 The amount includes remuneration for employment (256,000 euros) for the period in which he served as General Manager 09/28 12/31/2017, as well as the remuneration pursuant to article 2389, subsection 3, of the Italian Civil Code (104,000 euros) received for serving as Chief Executive Officer 09/28 12/31/2017;

col. 3 The bonus for the financial year 2017, for objectives achieved in the year itself, was waived by the Chief Executive Officer.

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**(4) Arnaud Roy de Puyfontaine Deputy Chairman**

col. 1 This amount refers to the compensation received as Deputy Chairman for the period 1/1-05/31/2017 (19,000 euros) and member of the Board of Directors (46,000 euros) for the period 01/01-05/31/2017;

col. 2 This amount refers to the compensation received as member of the Nomination and Remuneration Committee for the period 1/1-05/04/2017 (14,000 euros), as member of the Strategic Committee for the period 1/1-05/04/2017 (9,000 euros) and Chair of the Strategy Committee for the period 1/1-05/04/2017 (3,000 euros).

**(5) Giuseppe Recchi Deputy Chairman of the Board of Directors**

col. 1 This amount refers to the compensation received as Deputy Chairman (15,000 euros) and member of the Board of Directors (37,000 euros) for the period 06/01-09/27/2017;

col. 2 This amount refers to the compensation received as member of the Strategic Committee for the period 06/01-09/27/2017 (8,000 euros).

**(6) Camilla Antonini Director**

col. 1 This amount refers to the compensation received as member of the Board of Directors;

col. 2 This amount refers to the compensation received as member of the Control and Risk Committee for the period 07/24-12/31/2017.

**(7) Franco Bernabé Director**

col. 1 This amount refers to the compensation received as member of the Board of Directors;

col. 2 This amount refers to the compensation received as member of the Strategic Committee for the period 06/01-12/31/2017.

**(8) Ferruccio Borsani Director**

col. 1 Th