

TIM S.p.A.  
Form 20-F  
April 12, 2017  
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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, 2016**

**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**

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**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 **Savings Share ADSs** )  
Savings Shares (the **Savings Shares** )

The New York Stock Exchange\*

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

**None**

**(Title of Class)**

**Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:**

**None**

**(Title of Class)**

**Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock  
as of the close of the period covered by the annual report.**

Ordinary Shares 15,203,122,583

Savings Shares 6,027,791,699

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes  No

Note: Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

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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, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statement 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.

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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, 2016 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 Telecom Italia Group 4.1 Business 4.1.7 Updated Strategy (iii) Item 4. Information on the Telecom Italia Group 4.3 Regulation , (iv) Item 5. Operating and Financial Review and Prospects , (v) Item 8. Financial Information 8.2 Legal Proceedings and (vi) Item 11. Quantitative and Qualitative Disclosures About Market Risks , including statements regarding the likely effect of matters discussed therein.

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

significantly affect expected results.

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

- our ability to successfully implement our strategy in the future;
- a deterioration of the economic environment in the principal markets in which we operate, including, in particular, our core Italian market;
- the impact of regulatory decisions and changes in the regulatory environment in Italy, Brazil and other countries in which we operate;

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**Introduction**

- 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 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 Potential 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. TIM undertakes 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 ( <b>IAS</b> ) and all Interpretations issued by the IFRS Interpretations committee (formerly called International Financial Reporting Interpretations Committee <b>IFRIC</b> ), comprising those previously issued by the Standing Interpretations Committee ( <b>SIC</b> ).
<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.

**TIM Group and Group** means the Company and its consolidated subsidiaries.  
 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

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**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 2017-2019 three-year strategic plan (the **2017-2019 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 February 6, 2017, TIM presented its 2017-2019 three-year strategic plan.

The main strategic priorities and objectives of TIM in the domestic (Italian) market are as follows:

- excellent network infrastructure, the roll out of which will be further accelerated over the Plan period;
- a commercial approach focused on convergent offers and content;



- in the Domestic Mobile segment, TIM will focus on speeding up the penetration of mobile ultrabroadband, strengthened by the extensive reach of its 4G network and the dissemination of quality content;
- in the Fixed Domestic segment, TIM plans to accelerate the spread and adoption of optic fiber;
- the implementation of efficiency recovery actions, aimed at increasing cash-flow generation; and
- the relaunch of the main subsidiaries of the Group.

In Brazil the strategic plan envisages continuing the relaunch of TIM Brasil, repositioning the subsidiary company by leveraging the quality of the offer and the networks as well as convergence. In particular, a further boost will be given to the creation of the UBB mobile infrastructure and development of convergent offers.

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;

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

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**Item 3. Key Information**

**Risk Factors**

- our ability to successfully implement our internet and broadband 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 potential 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**

**Continuing weak global economic conditions, including the continuing weakness of the Italian economy and deteriorating economic conditions in Brazil, have adversely affected our business and continuing global and European economic weakness could further adversely affect our business and therefore have a negative impact on our operating results and financial condition.**

Our business is dependent to a large degree on general economic conditions in Italy and in our other principal market, Brazil, including levels of interest rates, inflation, taxes and general business conditions. A significant deterioration in economic conditions could adversely affect our business and results of operations. The weak economic conditions of the last several years have had an adverse impact on our business.

The economic recession that Italy has experienced in recent years has weighed on the development prospects of our core Italian market. Even if Italy officially emerges from recession, over the 2017-2019 period, Italian GDP is expected to grow by an average of 0.8 percent: the expected overall growth for Italy is lower than for the broader EU zone, which is expected to grow at approximately 1.4 percent over the same period, and will likely not be sufficient to return to pre-crisis levels. Private consumption growth, which had gradually sustained the recovery at the end of 2013, has weakened, due to declining consumer confidence and rising propensity to save. In Brazil, the market is affected by a macroeconomic environment that continues to deteriorate, resulting in shrinking domestic demand, rising inflation, and a sharp depreciation of the Brazilian Real. From the second quarter of 2017, moderate growth is expected for the Brazilian market, due improvements in consumer confidence, recovery of investments and a slight reduction in political uncertainty. The unemployment rate, which at the of 2016 was approximately 12%, is projected to rise further until mid-2017.

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 the operators. With respect to the mobile market, by the end of 2017, Iliad SA will launch a new mobile operator in Italy, which, according to Iliad's statements, is aimed at capturing 10 to 15 percent of the Italian mobile-phone

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market by relying on the same budget tactics that Iliad uses in the French market. TIM expects to launch a new no frills operator, completely independent from TIM, with its own fully-dedicated systems as a way of competing with the new comer.

Continuing uncertainty about global economic conditions poses a significant 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.

**Risks associated with TIM's ownership chain**

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** ).

**Competition Risks*****Alternative infrastructure operators in Italy could pose a threat to us, particularly in the medium-long term.***

The network development by Alt Net ( Alternative network operators ) (e.g.: Open Fiber and Infratel have disclosed plans to develop in Italy ultrabroadband telecommunications networks alternative to the one of TIM, respectively in the main Italian cities and in the Italian market failure areas) on a standalone basis or through partnerships with the 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;
- in geographical areas already affected by competition, which could result in losses of market share and revenues; and
- loss of retail market share in areas where competitors have not historically focused.

***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.***

Strong competition exists in all of the principal telecommunications business areas in Italy in which we operate.

Competition may become even more acute in the coming years, with the entry of additional international operators into 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 between Wind and H3G, which was authorized by regulatory bodies subject to certain structural corrective measures, including sale of frequencies and roaming contract signature, that will allow Iliad to enter the Italian market, becoming the fourth mobile infrastructured player after TIM, Vodafone and Wind Tre.

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 the consolidation and globalization of the telecommunications industry in Europe, including Italy, and elsewhere.

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**Item 3. Key Information**

**Risk Factors**

The emergence of alternative infrastructure operators could also pose a threat to us, particularly in the 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; and
- loss of existing or prospective customers and greater difficulty in retaining existing customers.

In addition, competition on innovative products and services in our Italian domestic fixed-line, mobile telephony and broadband 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/or
- 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 continuing introduction of innovative and value added services, if any or all of the events described above should 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 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 such as TIM. With the growing share of smartphones, tablets and computers 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.

In the long term, if non-traditional voice and messaging data services continue to increase in popularity, as they are expected to do, and if we and other mobile network operators are not able to address this competition, this could contribute to declines in average revenue per user ( **ARPU** ) and lower margins across many of our products and services, thereby having 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 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 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;

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- we are unable to provide broadband/fiber connections superior to those of our competitors; we experience any network interruptions or related problems with network infrastructure; and
  - we are unable to obtain adequate returns from the investments related to our network development.
- 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 service continues to grow, the ICT market expected to become a key element of our strategy.

We expect to experience increasing competition in this market as additional competitors (mainly from telecommunications operators through acquisition and partnership with IT operators) also enter this market. If we fail to develop 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 strategy with respect to 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 the following:

- relevant delays in granting the necessary permissions and authorizations, for installation of NGN lines;
- resistance of road administrators to allow using innovative techniques in excavating for and 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 a 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 the tenders for the grant of public funds which unduly penalize TIM by setting wholesale prices considerably lower than the regulated prices for TIM's similar services set in its Reference Offer 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 the Group's business, financial condition and results of operations.

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

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

***The Italian 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).

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 to 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, the voting rights (and any rights other than the property rights) connected to shares whose sale entails the transfer of control, will be suspended. The same rights will 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;

a power of veto by the Italian Government (including in the form of imposition of prescriptions or conditions) over any resolution, act or transaction that has the effect of modifying the ownership, control or availability of said 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 said prescriptions shall be 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.

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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 data protection legislation.***

Our success largely depends on the continued and uninterrupted performance of our IT, network systems and of certain hardware and datacenters that we manage for our clients. Our technical infrastructure (including our network infrastructure for fixed-line and mobile telecommunications services) is vulnerable to damage or interruption from technology failures, power loss, floods, windstorms, fires, terrorism, intentional wrongdoing, human error and similar events. Unanticipated problems at our facilities, system failures, hardware and software failures, computer viruses and hacker attacks, as well as terrorist attacks against our infrastructure, which remains a target, could affect the quality of our services and cause service interruptions. Any of these occurrences could result in reduced user traffic and reduced revenue and could negatively affect our levels of customer satisfaction, reduce our customer base and harm our reputation.

In addition, our operations involve daily processing and storage of large amounts of customer data and require uninterrupted, accurate, permanently available, real-time and safe transmission and storage of customer and other data in compliance with applicable laws and regulations. The proper functioning of, including prevention of unauthorized access to, our networks, systems, computers, applications and data, such as customer accounting, network control, data hosting, cloud computing and other information technology systems is critical to our operations. We may be held liable for the loss, release, disclosure or inappropriate modification of the customer data stored on our equipment or carried by our networks. IT system failure, interruption of service availability, industrial espionage, cyber-attack or data leakage, in particular relating to customer data, could seriously limit our ability to service our clients, result in significant compensation costs for which indemnification or insurance coverage may be only partially available, result in a breach of laws and regulations under which we operate or lead to fines and could cause long-term damage to our business and reputation.

***Our business depends on the upgrading of our existing networks.***

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

- upgrade the functionality of our networks to offer increasingly customized services to our customers;
- increase coverage in some of our markets;

- expand and maintain customer service, network management and administrative systems;
- expand the capacity of our existing fixed copper and mobile networks to cope with increased bandwidth usage; and
- upgrade older systems and networks to adapt them to new technologies.

In addition, due to rapid changes in the telecommunications industry, our network investments may prove to be inadequate or may be superseded by new technological changes. Our network investments may also be limited by market uptake and customer acceptance. If we fail to make adequate capital expenditures or investments, or to properly and efficiently allocate such expenditures or investments, the performance of our networks, both in real terms and relative to our competitors, could suffer, resulting in lower customer satisfaction, diminution of brand strength and increased turnover.

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

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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, lose 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, 2016, we had, on a consolidated basis, recognized potential liabilities of 386 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 internet usage by our customers could cause us 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 direct or indirect losses or legal and/or regulatory proceedings directed against us 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 are currently undertaking a restructuring of portions of our workforce in an effort to better align increased standards of service and expanded expertise with greater efficiency in our personnel costs. To that end, on September 7, 2015, we entered into a union agreement that provides for a number of different measures to enable us to manage our workforce in line with our business plan. These measures include employment support schemes (e.g., the introduction of reduced hours and wages), known as *contratti di solidarietà*, voluntary relocation, early retirement

measures and re-training.

In addition, on September 21, 2015 and October 27, 2015, we entered into agreements that provide for voluntary relocation and employment support schemes.

These agreements have continued to apply during the year 2016. Efforts continued to be made to improve staff productivity and service quality. To this end, negotiations started with the trade unions resulted in a number of company agreements being cancelled on October 6, 2016, effective February 2017.

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

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*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, 2016, our consolidated gross financial debt was 34,525 million euros, compared to 37,090 million euros on December 31, 2015. Our consolidated net financial debt was 25,955 million euros as of December 31, 2016, compared to 28,475 million euros on December 31, 2015. 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 continuing weak economic conditions, there could be deterioration in our income statement and statement of financial position measures used by investors and rating agencies in determining our credit quality. Ratios derived from these same separate income statement and statement of financial position measures are used by the rating agencies, such as Moody's, Standard & Poor's (S&P), and Fitch, which base their ratings on our ability to repay our debt.

Although rating downgrades do not have an immediate impact on outstanding debt, except for outstanding debt instruments that specifically contemplate taking ratings into account for determining interest expense, or on its relative cost to us, 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 performance of the telecommunications sector, unfavorable fluctuations in interest rates and/or exchange rates, further disruptions in the capital markets, particularly debt capital markets, and, in a broader sense, 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 investment 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, 2016 and December 31, 2015, respectively, 46,948 million euros (85.1 percent of total non-current operating assets) and 46,144 million euros (87.8 percent of total non-current operating assets); and
- Outside of Italy: as of December 31, 2016 and December 31, 2015, respectively, 8,197 million euros (14.9 percent of total non-current operating assets) and 6,390 million euros (12.2 percent of total non-current operating assets). Non-current operating assets outside of Italy are primarily denominated in Brazilian Real. 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

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liabilities is mandatory. Movements in exchange rates of the euro 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 in those countries and, therefore, may adversely affect our operating results or financial position.

In addition, we have raised, and may raise in an increasing proportion in the future, financing in currencies other than the euro, principally U.S. dollars and British 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, 2016 and December 31, 2015, 29 and 30 percent, respectively, 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, 2016, and December 31, 2015, we had derivative contracts in place for the sole management of our interest rate risk, including interest rate swaps, for notional amounts of 4,919 million euros and 3,689 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, commonly referred to as Brexit . The potential impact of Brexit will depend, in part, on the outcome of tariff, trade, regulatory and other negotiations. As a result of the referendum, global markets and currencies have been adversely impacted, including a sharp decline in the value of the British pound as compared to the U.S. dollar and the euro. Brexit, and even uncertainty over potential changes during any period of negotiation, could result in further instability in global financial markets and uncertainty with respect to national laws and regulations as the U.K. determines which E.U. laws to replace or replicate. Any of these effects of Brexit, among other factors, 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 on TIM requirements necessary to address identified competition problems. Current requirements are mainly focused on the regulation of TIM's 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:

- lack of predictability concerning both the timing of the regulatory proceedings and their final outcome;
- possible AGCom decisions with retroactive effects (e.g., review of prices of past years following the decisions of Administrative Courts).

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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 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, which is ongoing and is expected to be completed by May 2017, 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.

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

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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.\$ 1.0552, 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 30, 2016.

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 2012 to 2016 and for the beginning of 2017 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>
2012	1.3816	1.2774	1.3281	1.3779
2013	1.3927	1.2101	1.3297	1.2101
2014	1.2015	1.0524	1.1096	1.0859
2015	1.2015	1.0524	1.1096	1.0859
2016	1.1516	1.0375	1.1072	1.0552
2017 (through March 31, 2017)	1.0882	1.0416	1.0661	1.0698

<b>Monthly Rates</b>	<b>High</b>	<b>Low</b>	<b>Average(1)</b>	<b>At Period end</b>
October 2016	1.1212	1.0866	1.1014	1.0962
November 2016	1.1121	1.0560	1.0792	1.0578
December 2016	1.0758	1.0375	1.0545	1.0552
January 2017	1.0794	1.0416	1.0635	1.0794
February 2017	1.0802	1.0551	1.0650	1.0618
March 2017	1.0882	1.0514	1.0691	1.0698

(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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**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, 2016, 2015, 2014, 2013 and 2012, 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.

Following certain corrections of errors made in 2016 with respect to the Brazil Business Unit, the financial data for the years 2015, 2014, 2013 and 2012 have been appropriately adjusted and referred to as *revised* (for further details please see the Note *Form, Content and other general information The correction of errors* of the Notes to the 2016 Consolidated Financial Statements included elsewhere in this Annual Report ).

In 2016, 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, 2016, 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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	2016 (millions of U.S. dollars, except percentages, ratios, employees and per share amounts)(1)	2016(*) (millions of euros, except percentages, ratios, employees and per share amounts)	Year ended December 31,			
			2015(*) (Revised)	2014(*) (Revised)	2013(*) (Revised)	2012(*) (Revised)
<b>Separate Consolidated Income Statement Data:</b>						
<b>Revenues</b>	<b>20,075</b>	<b>19,025</b>	<b>19,719</b>	<b>21,574</b>	<b>23,443</b>	<b>25,736</b>
<b>Operating profit (loss)</b>	<b>3,927</b>	<b>3,722</b>	<b>2,963</b>	<b>4,529</b>	<b>2,752</b>	<b>1,684</b>
<b>Profit (loss) before tax from continuing operations</b>	<b>2,954</b>	<b>2,799</b>	<b>453</b>	<b>2,350</b>	<b>570</b>	<b>(312)</b>
<b>Profit (loss) from continuing operations</b>	<b>2,025</b>	<b>1,919</b>	<b>50</b>	<b>1,420</b>	<b>(556)</b>	<b>(1,392)</b>
Profit (loss) from Discontinued operations/Non-current assets held for sale	50	47	611	541	341	102
<b>Profit (loss) for the year</b>	<b>2,075</b>	<b>1,966</b>	<b>661</b>	<b>1,961</b>	<b>(215)</b>	<b>(1,290)</b>
<i>Profit (loss) for the year attributable to Owners of the Parent(2)</i>	<i>1,908</i>	<i>1,808</i>	<i>(70)</i>	<i>1,351</i>	<i>(659)</i>	<i>(1,635)</i>
<b>Capital Expenditures</b>	<b>5,145</b>	<b>4,876</b>	<b>5,197</b>	<b>4,984</b>	<b>4,400</b>	<b>4,639</b>
<b>Financial Ratios:</b>						
Operating profit (loss)/Revenues (ROS)(%)	19.6%	19.6%	15.0%	21.0%	11.7%	6.5%
Ratio of earnings to fixed charges(3)	2.65	2.65	1.18	2.18	1.29	0.83
<b>Employees, average salaried workforce in the Group, including personnel with temporary work contracts:</b>						
	57,855	57,855	61,553	59,285	59,527	62,758

Employees (excluding employees relating to the consolidated companies considered as Discontinued operations/Non-current 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	2,581	15,465	15,652	15,815	15,806
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**Basic and Diluted earnings per Share (EPS)(4):**

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

**Dividends:**

per Ordinary Share(5)					0.020
per Saving Share(5)	0.029	0.0275	0.0275	0.0275	0.031

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	2016		As of December 31,			
	(millions of U.S. dollars, except employees)(1)	2016	2015 (Revised)	2014 (Revised)	2013 (Revised)	2012 (Revised)
			(millions of euros, except employees)			
<b>Consolidated Statement of Financial Position Data:</b>						
<b>Total Assets</b>	<b>74,335</b>	<b>70,446</b>	<b>71,268</b>	<b>71,596</b>	<b>70,264</b>	<b>77,621</b>
<b>Equity:</b>						
Equity attributable to owners of the Parent	22,378	21,207	17,554	18,068	16,985	19,269
Non-controlling interests	2,475	2,346	3,695	3,516	3,086	3,580
<b>Total Equity</b>	<b>24,853</b>	<b>23,553</b>	<b>21,249</b>	<b>21,584</b>	<b>20,071</b>	<b>22,849</b>
<b>Total Liabilities</b>	<b>49,481</b>	<b>46,893</b>	<b>50,019</b>	<b>50,012</b>	<b>50,193</b>	<b>54,772</b>
<b>Total Equity and liabilities</b>	<b>74,335</b>	<b>70,446</b>	<b>71,268</b>	<b>71,596</b>	<b>70,264</b>	<b>77,621</b>
<b>Share capital(6)</b>	<b>12,227</b>	<b>11,587</b>	<b>10,650</b>	<b>10,634</b>	<b>10,604</b>	<b>10,604</b>
<b>Net financial debt(7)</b>	<b>27,388</b>	<b>25,955</b>	<b>28,475</b>	<b>28,021</b>	<b>27,942</b>	<b>29,053</b>

**Employees, number in the Group at year-end, including personnel with temporary work contracts:**

	2016		As of December 31,			
	(number at year-end)	(number at year-end)	2015	2014	2013	2012
			(thousands)			
Employees (excluding employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale) (number at year-end)	61,229	61,229	65,867	66,025	65,623	83,184
Employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale (number at year-end)	0	0	16,228	16,420	16,575	

**Statistical Data:****Domestic (Italy) Business Unit**

Physical accesses(8)	18,963	19,209	19,704	20,378	21,153
<i>Of which physical accesses (retail)</i>	<i>11,285</i>	<i>11,742</i>	<i>12,480</i>	<i>13,210</i>	<i>13,978</i>
Broadband accesses	9,206	8,890	8,750	8,740	8,967
<i>Of which retail broadband accesses</i>	<i>7,191</i>	<i>7,023</i>	<i>6,921</i>	<i>6,915</i>	<i>7,020</i>
Mobile lines	29,617	30,007	30,350	31,221	32,159

**Brazil Business Unit**

Mobile lines(9)	63,418	66,234	75,721	73,431	70,376
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(\*) 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. The 2012 comparative data have been appropriately restated.

(1) For the convenience of the reader, Euro amounts for 2016 have been converted into U.S. dollars using the Euro/Dollar Exchange Rate in effect on December 30, 2016, of 1.00 = 1.0552 U.S.\$.

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

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(3) Due to the loss in 2012, the ratio coverage was less than 1:1. The company would have needed to generate additional earnings of 358 million euros in 2012 to achieve a coverage of 1:1. 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:

- 15,039,128,128 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;
- 13,571,392,501 for the year ended December 31, 2013; and
- 13,277,621,082 for the year ended December 31, 2012.

Savings Shares was:

- 6,027,791,699 for the year ended December 31, 2016;
- 6,026,677,674 for the year ended December 31, 2015;
- 6,026,120,661 for the years ended December 31, 2014, 2013 and 2012.

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 by the Annual Shareholders Meeting to be held on May 4, 2017. Dividend coupons for the Savings Shares for the year ended December 31, 2016, will be clipped on June 19, 2017 and will be payable from June 21, 2017.



- (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, 2016 5.2.3 Non-GAAP Financial Measures .
  
- (8) Excludes full-infrastructured 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 the prior years 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, 2016.

Year ended December 31,	Dividends on Ordinary Shares			Dividends on Savings Shares		
	Euros per Share	U.S. Dollars per Share(1)	(millions of euros)	Euros per Share	U.S. Dollars per Share(1)	(millions of euros)
2012	0.0200	0.0260	267.59	0.0310	0.0403	186.81
2013				0.0275	0.0377	165.72
2014				0.0275	0.0299	165.72
2015				0.0275	0.0314	165.76
2016(2)				0.0275	0.0294	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, 2016, Euro amounts have been translated into U.S. dollars using the Noon Buying Rate in effect on March 31, 2017.

(2) Subject to approval at the Annual Shareholders Meeting to be held on May 4, 2017. TIM's dividend coupons for its Savings Shares for the year ended December 31, 2016, will be clipped on June 19, 2017 and will be payable from June 21, 2017.

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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**Item 4. INFORMATION ON THE TIM GROUP**

**4.1 BUSINESS**

**4.1.1 BACKGROUND**

The legal name of the company is Telecom Italia S.p.A. named also TIM S.p.A. .

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

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

Our Depository in New York (JP Morgan Chase) 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 has subsequently increased its shareholding in the Company and, as of April 7, 2017, Vivendi held 23.94% of the ordinary share capital of TIM. Vivendi does not hold Savings Shares (or Savings Share ADSs) neither it has different voting rights in meetings of ordinary shareholders of TIM.

At the Shareholders Meeting held on December 15, 2015, Vivendi s proposal to enlarge the Board of Directors of TIM from 13 to 17 members was approved, and four new Directors presented by Vivendi were appointed.

On March 22, 2016 former Chief Executive Officer, Marco Patuano, who had been appointed to that position on April 18, 2014 resigned. On March 30, 2016 the Board of Directors appointed Flavio Cattaneo, to serve as Chief Executive Officer. Mr Cattaneo was already a Company director. On April 27, 2016, the Board of Directors appointed Arnaud de Puyfontaine, also a company director, as Vice Chairman of the Company, without assigning him any delegated powers.

See Item 7. Major Shareholders and Related-Party Transactions for further details.

**4.1.2 DEVELOPMENT**

On February 6, 2017, TIM presented its 2017-2019 three-year strategic Plan. The 2017-2019 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 these 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 engaged principally 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).

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

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

The principal changes in the scope of consolidation in 2015 are as follows:

- **INWIT S.p.A.** Domestic Business Unit: was established in January 2015 and in June 2015, the initial public offering for the ordinary shares of INWIT S.p.A. on the Electronic Stock Exchange organized and managed by Borsa Italiana S.p.A. was successfully completed;
- **Alfabook S.r.l.** Domestic Business Unit: on July 1, 2015 Telecom Italia Digital Solutions S.p.A. acquired 100% of Alfabook S.r.l., which consequently entered the Group's scope of consolidation;
- **TIM Real Estate S.r.l.** Domestic Business Unit: was established in November 2015. On February 3, 2017, as part of the programme to streamline the Company's holdings, the Board of Directors approved the start of the process to incorporate Tim Real Estate S.r.l., a TIM wholly-owned subsidiary, into TIM. The Company expects to complete the incorporation process by mid-2017.

With the exception of the INWIT initial public offering, 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, 2015.

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, 2016 5.2.2. Business Segment and Note Scope of Consolidation of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

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 in 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 has possesses 2600MHz and 1450MHz licences.



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At December 31, 2016, the TIM Group had approximately 11.3 million physical accesses (retail) in Italy, a decrease of 0.5 million compared to December 31, 2015. The Wholesale customer portfolio in Italy was approximately 7.7 million accesses for telephone services at December 31, 2016 (an increase of 0.2 million accesses as compared to December 31, 2015). The broadband portfolio in Italy was 9.2 million accesses at December 31, 2016 (consisting of approximately 7.2 million retail accesses and 2 million wholesale accesses), substantially stable compared to December 31, 2015 (8.9 million accesses). In addition, the TIM Group had approximately 29.6 million mobile telephone lines in Italy at December 31, 2016, a decrease of approximately 0.4 million compared to December 31, 2015.

***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 speeding up the development of 3G and 4G networks. Moreover, with the acquisitions of 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.

At December 31, 2016, the TIM Group had 63.4 million mobile telephone lines in Brazil (66.2 million at December 31, 2015).

**4.1.4 DISPOSALS AND ACQUISITIONS OF SIGNIFICANT EQUITY INVESTMENTS IN 2016**

For a description of disposals and acquisitions of significant equity investments in 2016 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 2017**

For a description of recent developments please see Item 8. Financial Information 8.2 Legal Proceedings and Note Events Subsequent to December 31, 2016 of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

**Table of Contents****Item 4. Information On The TIM Group****Business****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, 2016:

(\* 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. and Noverca.

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

For 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, 2016 5.2.5 Business unit financial data .

**4.1.7 UPDATED STRATEGY*****Strategic Priorities and Objectives for the 2017-2019 Plan***

On February 6, 2017, TIM presented its 2017-2019 three-year strategic plan, named *A Transforming Company* (the **Plan** ). The Plan aims to significantly transform the Company and establish TIM as a market leader in terms of quality in fixed and mobile services through an approach based on content, convergence, ICT services, innovation and customer proximity. The Plan includes the following strategic priorities over the next three years.

***Domestic (Italian) market***

The main strategic priorities in the Domestic (Italian) Market are:

- Excellent network infrastructure, the roll out of which will be further accelerated over the Plan period. By the end of 2019, TIM's business plan aims to reach over 99% of the population with the LTE mobile network (4G) and 95% of the population (household passed) with optic fiber. Moreover, on March 23, 2017 TIM's Board of Directors approved a project to create a company dedicated exclusively to the selective development of new fiber infrastructure in the areas included in the cluster classifications C and D (the rural or so-called "white areas") based on EU regulations. The Project is in line with the 2017-2019 Strategic Plan and does not envisage an increase in the level of investment that the TIM Group has already planned. In fact, the project is expected to be carried out through the creation of a company in collaboration with a financial partner that will act as majority shareholder in

such company. Through this partnership TIM will aim to achieve its targets to cover the country with ultrabroadband almost 2 years ahead of the schedule set out in the three year plan.

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Thanks to this acceleration in Clusters C and D, the target of 95% coverage of the Italian population with UBB connections could be reached in mid-2018, increasing to 99% by the end of the current plan in 2019, due also to the contribution of wireless technologies.

- A commercial approach focused on convergent offers and content, also thanks to the launch of national and international co-productions through TIMVision. Such commercial approach is expected to strengthen the business model, further exploiting best infrastructure and excellent customer services with an increased focus on the dissemination of premium digital services and content, including on an exclusive basis.
- In the Domestic Mobile segment, in a context characterized by data consumption that is expected to continue to grow, TIM will focus on speeding up the penetration of mobile ultrabroadband, strengthened by the extensive reach of its 4G network and the dissemination of quality content.
- In the Fixed Domestic segment, TIM plans to accelerate the spread and adoption of optic fiber. The commercial strategy is expected to play a key role, aimed at retaining current customers through, for example, the supply of technologically evolved home devices connected to the domestic network Internet of Things which can be paid for directly in the bill.
- The implementation of efficiency recovery actions, aimed at increasing cash-flow generation through three levers: cost optimization, streamlined organization and processes transformation.
- Relaunch of the main subsidiaries of the Group: synergies with INWIT will be targeted for maximization; Olivetti is expected to be able to leverage the value of its brand to offer products with a cutting-edge design and ICT services; Telecom Italia Sparkle is expected to continue its growth phase by identifying synergies with the Business department of TIM for the management of international customers and through other growth options.

**Brazil**

In Brazil the Plan envisages continuing the relaunch of TIM Brasil, repositioning, if any, the company through leveraging the quality of the offer and of the networks and through convergence, to compete successfully in the post-paid segment at the same time returning to solid profitability. In particular, a further boost will be given to the creation of the UBB mobile infrastructure it is expected that by the end of the Plan 95% of the population will have access to 4G with coverage in approximately 3,600 cities and to the development of convergent offers also thanks to agreements with the main producers of premium content.

*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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**Business**

**4.1.8 THE ORGANIZATIONAL STRUCTURE**

The following diagram highlights the organizational structure of the TIM Group as of April 7, 2017:

**Table of Contents****Item 4. Information On The TIM Group****Business Units****4.2 BUSINESS UNITS****4.2.1 Domestic**

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

The company operates in the electronic communications infrastructure business, specifically relating to 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.

The Domestic Business Unit is organized as follows as of December 31, 2016:

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

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

- **Core Domestic:** includes all telecommunications activities within the Italian market. The sales market segments established on the basis of the customer centric organizational model are as follows:
  - **Consumer:** the segment consists of all Fixed and Mobile voice and Internet services and products managed and developed for individuals and families and of public telephony; customer care, operating credit support, loyalty and retention activities, sales within its remit, and administrative management of customers; the segment includes the companies 4G and Persidera;
  - **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; following the merger of TIM Digital Solutions in Olivetti, the latter was

incorporated into the Business segment as of January 1, 2016;

- **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;
  
- **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, both for TIM and other operators;



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- **Other Operations units:** covering technological innovation and the processes of development, engineering, building and operating network infrastructures, real estate properties and plant engineering; development of the information technology strategy, guidelines and plan;
- **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, 2016, 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 27 partners having a total of approximately 4,000 operators and the **Agent** channel with 100 Direct Agents and a network of 71 partners with approximately 1,400 sales agents;
- the **Pull** channel: consisting of the retail network of shops, dealers and large retailers, amounting to a total of approximately 5,000 retail points of sale (at December 31, 2016). 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 17 technical partners that provide maintenance and other related services.

· ***Business***

Business customers are managed by a single Sales Unit that covers both direct and indirect sales. The Sales Channel is organized into five different segments. One of these segments is dedicated to Top Customers, which includes the most important Private and Public Sector companies and is managed only through the direct sales channel. The remaining four manage Strategic, Large, Medium and Small customers at the regional level and include both the indirect and direct sales channels.

· ***Indirect Sales Channel***

The business distribution channels are comprised of:

- *BP Business Partner* channel (approximately 90): a network focused on standard offers (Small market) with about 1,550 agents;
- *ISP Ict sales partner* channel (approximately 70): a network organized geographically focused on VAS and ICT products with 200 agents;
- *Outbound Call Center*: 8 partners focused on specific canvass and customer loyalty activities;
- *Senior Agent*: 120 Agents focused on medium enterprise customers;
- *Shops*: some specific shops (approximately 2,400) offering business products and assistance.

**Table of Contents****Item 4. Information On The TIM Group****Business Units**· ***Direct Sales Channel***

At the end of 2016 approximately 900 sales staff had a dedicated portfolio to manage and develop, supported by pre sales and post sales teams. The main activities include:

- offering the whole range of services (fixed and mobile voice and data, ICT services and products);
- promoting and managing a 360 degree relationship with the customer, providing support and assistance.

· ***National Wholesale Services***

The National Wholesale Services ( **NWS** ) department manages relationships with approximately 395 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 NWS 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 for the North, 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 NWS 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:

	<b>As of and for the years ended December 31,</b>		
	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>DOMESTIC FIXED</b>			
Physical accesses (thousand)(1)	18,963	19,209	19,704
<i>Of which retail physical accesses (thousand)</i>	<i>11,285</i>	<i>11,742</i>	<i>12,480</i>
Broadband accesses in Italy at year-end (thousand)(2)	9,206	8,890	8,750
<i>Of which retail broadband accesses (thousand)</i>	<i>7,191</i>	<i>7,023</i>	<i>6,921</i>
<b>Network infrastructure in Italy:</b>			
access network in copper (millions of km pair, distribution and connection)(3)	114.4	114.3	114.0
access and carrier network in optical fiber (millions of km fiber)	12.6	10.4	8.3
<b>Total traffic:</b>			
Minutes of traffic on fixed-line network (billions):	69.1	76.9	84.2
<i>Domestic traffic</i>	<i>55.6</i>	<i>62.5</i>	<i>68.9</i>
<i>International traffic</i>	<i>13.5</i>	<i>14.4</i>	<i>15.3</i>
Broadband traffic (PBytes)(4)	5,774	4,126	3,161
<b>DOMESTIC MOBILE</b>			
Number of lines at year-end (thousand)(5)	29,617	30,007	30,350
Change in lines (%)	(1.3)	(1.1)	(2.8)
Churn rate %(6)	22.8	23.4	24.2
<b>Total traffic:</b>			
Outgoing retail traffic (billions of minutes)	44.9	43.6	42.7
Incoming and outgoing retail traffic (billions of minutes)	69.6	66.1	62.7
Mobile browsing volumes (PBytes)(7)	258.5	182.6	133.9
Average monthly revenues per line(8) (euro)	12.4	12.1	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) In 2015 and 2014 amounts are recalculated according to different methods, in particular on cable sections in several central areas.

(4) DownStream and UpStream traffic volumes.

- (5) The figure includes the SIM cards used on platforms for delivering Machine-to-Machine services.
- (6) 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.
- (7) National traffic, excluding roaming.
- (8) 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 the main regulatory events which occurred in 2016 that 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*

The competitive market remains characterized by the opening of the TLC market to competition from non-traditional operators (in particular Over the Top companies (OTTs) and producers of electronic and consumer devices) and by the development of new over the network services (mainly in the IT and Media fields) by traditional telecommunications operators. As such, traditional telecommunications operators not only face core competition from other operators in the sector (including Mobile Virtual Operators), which remain the primary

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competitive force in the market, but must also deal with the emergence of OTTs and device producers, which operate in the digital world, using a different set of assets and competitive strategies. OTTs have been leading the transformation of the methods of use of TLC services (including voice), increasingly integrating them with Media and IT.

Over time, therefore, the business models of traditional players are changing to meet the challenges from new entrants and to exploit new opportunities. For example:

- **Media:** with the web becoming increasingly more important as a complementary distribution platform, broadcasters are feeling greater competitive pressure from consumer electronics companies, telecommunications operators and OTTs;
- **Information Technology:** the decline in traditional revenues is driving various players towards cloud computing, with the goal of protecting their core business. Traditional telecommunications operators are strengthening in this sector, including through 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 TLC operators; With respect to the current positioning of the telecommunications operators in converging markets, on the other hand, as partially described above, the following is taking place with different levels of progress:
  - development of Innovative Services in the IT market, particularly in Cloud services;
  - development of new Digital Services, especially in the areas of Entertainment (e.g. TV, Music, Gaming), Smart Home, Digital Advertising, Mobile Payment-Digital Identity.

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

The fixed-line telecommunications market continues to experience, on one side, a significant decline in access and voice revenues, mainly due to the reduction in use also determined by the progressive shift of voice traffic to mobile, and on the other side, the growth of broadband revenues. In recent years, operators have concentrated mainly on developing the penetration of broadband and attempting to protect voice by introducing bundled voice, broadband and services deals in a highly competitive environment that is characterized by pricing pressures.

The evolution of the competitive product offering has also been influenced by a convergence on an approach based on the control of infrastructure (above all Local Loop Unbundling LLU). The main fixed operators are also offering mobile services, also as Mobile Virtual Operators (MVOs). With respect to infrastructure, Open Fiber and Infratel have publicly presented development plans for their telecommunications networks as alternatives to TIM. These plans concern the main Italian cities and market failure areas (for further details please see Item 4. Information on the TIM

Group 4.3 Regulation Broadband and Digital Divide ).

Competition in the Italian fixed telecommunications market is characterized by the presence of a number of operators other than TIM, such as Wind-Infostrada, Fastweb, Vodafone, and Tiscali, that have different business models focused on different segments of the market. In 2016, the migration of customers from fixed-line to mobile telephony services continued, as well as the migration to alternative communications solutions (Voice Over IP, messaging applications and social network chat), driven by the use of the Internet, the penetration of broadband, PCs and other connected devices, as well as service quality. At December 31, 2016, fixed accesses in Italy remained stable relative to 2015 at approximately 20.3 million (including infrastructured OLOs and Fixed Wireless Accesses). Competition in the access market led to a gradual reduction in Telecom Italia's market share.

We estimate that in the broadband market, as of December 31, 2016, fixed broadband customers in Italy reached a penetration rate on fixed accesses of about 77%. The spread of broadband is 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 (Voice over IP, content particularly Video, social networking services, etc.).

***Competition in Mobile Telecommunications***

In the mobile market, which is saturated and mature in the traditional voice services segment, the second and third Human SIM cards continued to follow a rationalization trend while the Not Human SIM cards continued to



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grow. Revenues from traditional services, such as voice and messaging, continued to decline as a result of competition among operators and the increasing spread of over the internet communication apps, such as WhatsApp. In 2016, however, the gradual improvement that had begun in the second half of 2014 consolidated. This, combined with the growth of mobile broadband, which has continued at a sustained rate, caused spending on services to be back to modest growth in 2016.

In 2016, the growth in mobile broadband customers continued due to the development of the LTE and the small screen segment, 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, there are other market environments, associated with the development of mobile broadband, with major potential for growth in the medium term, such as the Internet of Things and mobile payment.

Competition in the Italian mobile telecommunications market is undergoing significant changes. Wind Tre, formed by the merger between Wind and H3G, is currently operating. The transaction was authorized by the competent regulatory authorities following the implementation by the two companies of structural corrective measures (e.g., the sale of frequencies and the signature of a roaming agreement), which will enable the French operator Iliad to enter the Italian market in the near future, thus becoming the fourth operator with infrastructure, in addition to TIM, Vodafone and, precisely, 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 enjoy significant growth compared to 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 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 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 63.4 million mobile lines which cover each of the Brazilian states and the Federal District. As of December 31, 2016, the market combined penetration reached approximately 118% of the Brazilian population and its combined market share totaled approximately 26%.

Since TIM Brasil group began operating in the Brazilian market, its intention has been to provide its customers with innovative services based on a state-of-the-art technology. This goal has been reached with the provision of services through a robust 3G network in addition to a fast growing state-of-the-art Fourth Generation (4G) network.



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The table below sets forth, for the periods indicated, the number of mobile lines of the Brazil Business Unit:

	<b>As of and for the years ended December 31,</b>		
	<b>2016</b>	<b>2015</b>	<b>2014</b>
Number of lines at year-end (thousands)(*)	63,418	66,234	75,721
MOU (minutes/months)(**)	116.6	119.5	135.8
ARPU (Reais)	18.0	16.7	17.7

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

(\*\*) Net of visitors.

#### v **MARKETING**

With the rapid change in the profile of consumption of telecommunications services by Brazilian users, TIM Brasil continued its efforts to innovate its offerings for all customer segments (Prepaid, Control and Postpaid) 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 protect and increase the value of the prepaid customer base, where the company continues to be a leader, and grow its base of postpaid customers by providing more complete voice and data offers at reasonable prices, which could stimulate usage growth.

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 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, 2016, we had more than 10.8 thousand points of sales through premium shops and dealers (exclusive or multi-brand) and consolidated partnerships with large retail chains. This figure includes 175 of TIM Brasil's own stores. In addition to these retail stores, TIM Brasil customers have access to prepaid phone services through supermarkets, newsstands, and other small retailers, totaling more than 332 thousand points of sale throughout Brazil.

For the corporate market, TIM Brasil has more than 550 third-party business partners focused on serving small and medium-size companies and a direct sales force team of 94 employees focused on large companies.

In order to serve the customer base of over 63.4 million customers, TIM Brasil maintains 16 customer care centers comprising around 14 thousand customer service representatives. 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 2016 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 2016, the Brazilian mobile market reached 244.1 million lines, 13.7 million lines (or 5.3%) lower than at the end of 2015, and a penetration rate of 118.0% of the population (125.7% in 2015). Consequently the Brazil Business Unit churn rate in 2016 was 52.4% (59.1% in 2015).

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**Business Units**

**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 (6,481 telecommunication towers) for approximately 3 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 2016, the fourth and fifth partial sale of 336 towers was completed for approximately 134 million reais, or approximately 35 million euros. The final realized gain, net of transaction costs, was 44 million reais (approximately 12 million euros at the 2016 average exchange rate). The amount of non-current assets reacquired under finance leases came to 93 million reais (approximately 24 million euros at the 2016 average exchange rate).

In 2016, financial leases were also taken out on newly-built towers for 15 million reais (approximately 4 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.

**4.2.3 COMPETITION**

We face competition in all of our businesses.

For details please see Item 4. Information on the TIM Group 4.1 Business 4.1.7 Updated Strategy , Item 4. Information on the TIM Group 4.2.1 Domestic and Item 4. Information on the TIM Group 4.2.2 Brazil .

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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 ), which 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 in terms of broadband coverage and take-up to be achieved by 2020 namely:

1. Broadband coverage at 30 Mbit/s or more for 100% of EU citizens; and
2. 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 Directive will have to be approved according to the standard co-decision legislative procedure by the European Parliament and the Council and then transposed into national law. The timetable for agreeing to, enacting and implementing the EECC Directive will depend on the levels of support that it receives from the European Parliament and the Council. The transposition into the law of each Member State is unlikely to happen 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 suggested approach to access regulation are:

- regulatory relief in the presence of co-investment and Very High Capacity ( **VHC** ) networks;

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- lighter regulation for wholesale-only vertically separated undertaking;
- 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.

The EC proposes to include in the scope of the TLC regulatory framework 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 and services based on the conveyance of signal, typically provided by Telcos.

With respect to spectrum, in order to stimulate investment, the EC proposes 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.

As to the Universal Service Obligation (the **USO** ), the provision of affordable functional internet access and voice communications services at least at a fixed location would be included in the scope of the USO. 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.

v **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 values valid from July 1, 2014 are:

**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, introduces new rules on intra-EU roaming by amending the Roaming III Regulation.

The TSM Regulation provides for the abolishing of any roaming service surcharge on top of domestic service prices subject to fair use limits to avoid abuses, starting from June 15, 2017 (Roam Like at Home RLAH regime).

For intra-EU traffic exceeding the fair use limits, operators will be allowed to levy a surcharge on top of domestic tariffs. Such a surcharge will be capped at the wholesale caps defined in the Roaming III Regulation, and reported in the table above.

From April 2016 to June 2017, operators are allowed to levy a surcharge on top of domestic tariffs (equal to the wholesale caps defined in the Roaming III Regulation and reported above) for all intra-EU roaming traffic.

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The TSM Regulation provides for the revision of the wholesale rules before the RLAH regime can become effective. To this end, a proposal by the Commission was published on June 15, 2016. On January 31, 2017, the Parliament and the Council reached a provisional agreement on new wholesale caps (Voice: 3.2 eurocents/min, SMS 1 eurocents/SMS), introducing a glide path for wholesale data (0.77 eurocents/MB in 2017, 0.6 eurocents/MB in 2018, 0.45 eurocents/MB in 2019, 0.35 eurocents/MB in 2020, 0.3 eurocents/MB in 2021, 0.25 eurocents/MB in 2022). The agreement is expected to be officially ratified by the Parliament and the Council by May of 2017.

v ***New rules introduced by the TSM Regulation on Net Neutrality***

The TSM Regulation introduces new rules on Net Neutrality, which will apply starting in April of 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 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**

v ***The legal Basis***

The legal basis for the electronic communications sector in Italy is 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 ;
  - the Consumer Code ;
  - Law June 18, 2009, no. 69 providing measures to simplify the procedures for the installation and development of optical fiber networks (Article 1 Broadband );
- <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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· Decree Law July 6, 2011, no. 98, enacted by Law July 15, 2011, no. 111 further simplifying the procedure for the installation of small mobile equipment (0.5 sq. meters of radiator area) and low power equipment (7 watt);	
· Decree Law October 18, 2012 no. 179 (enacted by Law December 17, 2012 no. 221) providing for further broadband networks funding to cancel the digital divide, measures to accelerate the roll-out of mobile fourth generation networks and administrative simplifications for optical fiber layout;	
· 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 <b>AGCM</b> ) the evaluation of sanctions for unfair commercial practices;	
· Law no. 183/2014 (Legislative decree of the Italian "Jobs Act") and its implementing Decree no. 148/2015, setting forth measures to reform the labor market and safety nets in order to secure a generational turnover;	
· Decree of December 2, 2014 of the Ministry of Environment, implementing the Decree Law no. 179/2012, setting forth certain guidelines in the area of electromagnetic emissions. Two further decrees on this matter are expected to be published;	
· Law no. 115 of 2015 (European Law 2014), amending the contribution fees paid to AGCom by the Operators;	
· Legislative Decree no. 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;	
· Ministry Decree May 11, 2016 (Institution of SINFI - Sistema informativo nazionale federato delle infrastrutture), implementing Legislative Decree no. 33/2016, through the establishment of a single infrastructures directory;	
· Legislative Decree no. 179/2016 (Modifications to Digital Administration Code), which set users' right to use the phone credit for electronic micro-payments towards PA;	

- Law no. 232/2016 ( Legge di Bilancio 2017 ), which set i) rules for delocalization of call centers in non-EU countries; ii) renewal of rights of use of the GSM mobile radio frequencies (900 MHz band) and UMTS (1800 MHz); iii) support the implementation of the Digital Agenda.

The 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.

v *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.

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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.

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 (June-July 2016), it was approved by the Italian NRA (Decision 652/16/CONS of December 2016).

The implementation of the NEM is ongoing and will be completed by May 2017.

**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).

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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 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 no. 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, to be implemented through a specific proceeding (in progress);



- 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.

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The following table shows the 2015-2017 wholesale economic prices (2013 and 2014 prices were the same):

<b>Service</b>	<b>2013/14</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
LLU (euro/month/line)	8.68	8.61	8.61	8.61
SLU (euro/month/line)	5.79	5.57	5.43	5.3
SA (euro/month/line)	0.86	0.73	0.73	0.73
WLR POTS (euro/month/line)	11.14	11.06	11.06	11.06
WLR ISDN (euro/month/line)	13.78	13.67	13.67	13.67
Bitstream shared (euro/month/line)	6.74	4.96	4.63	4.29
Bitstream naked (euro/month/line)	15.14	13.59	12.8	12.46
VULA FTTC shared (30 Mbps) (euro/month/line)	13.94	7.92	7.90	7.88
VULA FTTC shared (50 Mbps) (euro/month/line)	13.94	9.73	9.68	9.63
VULA FTTC naked (30 Mbps) (euro/month/line)	20.63	13.58	13.42	13.27
VULA FTTC naked (50 Mbps) (euro/month/line)	20.63	15.38	15.20	15.02
VULA FTTH (100 Mbits/10 Mbits) (euro/month/line)	24.9	23.15	22.64	22.12
VULA FTTH (40 Mbits/40 Mbits) (euro/month/line)	34.53	32.08	31.36	30.65
VULA FTTH (100 Mbits/100 Mbits) (euro/month/line)	86.49	81.37	79.57	77.77

<b>NGA<sup>3</sup> wholesale physical access Monthly fees (euro)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Miniduct access new infrastructures (IRU 15 years euro/miniduct/meter)	10.60	10.60	10.1	9.61	9.11
Miniduct access existing infrastructures (IRU 15 years euro/miniduct/meter)	6.44	6.44	6.36	6.29	6.21
Entries to buildings (IRU 15 years euro/miniduct)	385.46	385.46	382.70	379.95	377.19
Dark fiber primary section (IRU 15 years/fiber)	3,900.35	3,900.35	3,639.97	3,379.58	3,119.20
Dark fiber secondary section (IRU 15 years/fiber)	1,700.91	1,700.91	1,697.32	1,693.72	1,690.13
End to End service (euro/month/line)	65.10	65.10	61.53	57.96	54.39
Fiber terminating segment (euro/month/line)	5.96	5.96	5.84	5.72	5.60

The access service fees are cost-oriented according to BU-LRIC+/CCA (Bottom-Up Long Run Incremental Cost Plus/ Current Cost Accounting) 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 an unbundling and externalization 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-mentioned delivery and assurance activities. The proceeding is still ongoing and AGCom's final decision, after notification of the draft decision to the European Commission (EC), is expected by the end of the second quarter of 2017 unless the EC raises doubts and opens an investigation phase which can extend the proceedings by 4 months.

#### **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

<sup>3</sup> New Generation Access.

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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.

**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.

AGCom established:

- to confirm SMP designation for TIM in the origination market, although this market has been removed from the EC Recommendation;
- to 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;
- to 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;
- to remove the existing obligations imposed on TIM in the wholesale market for district-level transit; and
- to 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 on 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, 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).

#### **4.3.5 ACCOUNTING SEPARATION AND NETWORK 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.

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 Weighted Average Cost of Capital (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.

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Despite the removal of retail 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 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: 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.

**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.

#### **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.

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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.

The Council of State, with a decision published on October 2, 2015, rejected the retroactivity of the criteria introduced by AGCom's Decision 01/08/CIR, so the Italian NRA has been called upon to renew all the procedures for the years 2004 to 2007, applying the net cost calculation methodologies which were in effect at the time. The judgment of the Council of State may result in a reassessment of the net cost for the years 2004-2007.

TIM submitted net cost calculations of the USO for the years 2008, 2009, 2010, 2011 and 2012 to AGCom. The audit of the 2008 and 2009 net costs was completed in March 2014, but AGCom has not yet issued a final decision.

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 Regional Administrative Court ( **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 Ministry of Economic Development is responsible for reviewing the scope and definition of the USO every two years and, in September 2014, together with AGCom, opened a formal proceeding concerning the identification of the criteria for designating one or more operators responsible for providing the universal service. The proceeding remains ongoing.

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.



Finally, with decision 46/17/CONS, issued on February 24, 2017, AGCom introduces 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, extend the current 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

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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 2016, the total number of public payphones was about 50,000.

**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 contribution fee, 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.

In particular, on April 1, 2016, TIM paid 19.8 million euros calculated on a revenue basis, under reserve, applying the 2016 AGCom rate of 1.4 per thousand (Decisions 605/15/CONS and 34/16/CONS).

On October 2016, the Cassation Court dismissed the appeal brought by AGCom against the ruling of the Council of State confirming the withdrawal of decisions 99/11/CONS (AGCom's request of the alleged recoverable amounts on AGCom contribution for the years 2006-2010, equal to approximately 27 million euros) and decision 599/10/CONS (determination of AGCom contribution for the year 2011).

On February 6, 2016, 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 fee are unchanged from the guidelines for the calculation of the 2016 fee.

**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" 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.

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 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 ). TIM decided to not participate to the Second Tender .

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Despite TIM was pre-qualified also for this second tender, the Company didn't submitted 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. This choice was confirmed in the 2017-2019 Strategic Plan already presented by the company to the financial community too.

**4.3.11 PRIVACY AND DATA PROTECTION**

TIM must comply with Italy's Personal Data Protection Code (Legislative Decree June 30, 2003 no. 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.

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.

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.

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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 **Regulation EU 2016/679**

EU Regulation no. 2016/679 on the protection of natural persons in connection with the processing of personal data and to the free movement of such data General Data Protection Regulation ( **GDPR** ), published on May 4, 2016 in the Official Journal of the EU, shall be directly applicable in all Member States from May 25, 2018.

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 notifying 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** ) bringing together 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 4% of the total worldwide turnover of a company.
- 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.

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**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 no. 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**

In 2016, there were two antitrust proceedings involving TIM before AGCM:



- **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.
  
- **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.
  
- **Proceeding I799** : in February 2017 the Antitrust Authority launched an investigation into the new partnership Flash Fiber between TIM and Fastweb. The partnership is aimed at accelerating the creation of ultrabroadband infrastructure with FTTH (Fiber to the Home) technology in 29 Italian cities. The investigation aims to verify whether the agreement violates Art.101 of the Treaty on the Functioning of the European Union by examining the possible effects of the commercial coordination activities by the two entities. The investigation is expected to conclude by December 31, 2017.

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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 Telefonico 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.

**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 (Telefônica, 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.

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.

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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. From 2016, the fixed interconnection rates will follow a cost oriented approach.

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.

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 would lead to cost orientated values starting from 2016 until 2019.

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, identification of operators with market power and for the 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.

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 due on March 22, 2017.

#### 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

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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** ).

ANATEL established that Fixed Termination Rates ( **FTRs** or **TU-RL** ) and Mobile Termination Rates ( **MTRs** ) will be cost oriented beginning in 2016 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 Fixed termination rates**

In February 2016, fixed termination rates of local incumbent operators (Telefonica, Oi, CTBC, Sercomtel) decreased by almost 70% on average. Interconnection rates in Brazil vary per region and operator. They will continue to decrease, reaching 0.0044 reais/min (0.12 eurocents) in 2019. The sharp decrease is the result of ANATEL implementing a BU-LRIC model to set cost oriented interconnection rates.

**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-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.

**Table of Contents****Item 4. Information On The TIM Group****Regulation****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 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 are 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.

On February 29, 2016 Rio Verde in Goiás was the first city to become 100% digital. In October, the Analog TV switch off process was initiated in Brasilia and the process for the region was completed on November 17. Commercial LTE already implemented.

**Ø 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 additional 15.

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.

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.

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**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.

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

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

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

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**Transactions With U.S. Sanctioned Countries**

**4.4 TRANSACTIONS WITH U.S. SANCTIONED COUNTRIES**

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

**Activities relating to the Designated Countries**

The only activities we have that, to our knowledge, relate in any way to the Designated Countries are:

- (i) Roaming Agreements with local mobile phone operators:
  - 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., in Iran;
  - Sudanese Mobile Telephone (former ZAIN SD) and MTN Sudan, in Sudan;
  - MTN Syria (former Spacetel Syria 94 and former Areeba) and Syriatel Mobile Telecom SA ( Syriatel ), in Syria.
- (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 Telecommunication Infrastructure Company of Iran (TIC) in Iran; Sudan TLC (former PT&TG PUBLIC SUDAN), Sudatel, ZAIN Sudan and Canartel in Sudan; and Syrian TELECOMM (Directorate General of Syrian) in Syria.

In addition 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, also 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 Islamic Republic of Iran Shipping Lines.

## (iii) Commercial Sale and Other Agreements.

In quantitative terms, the impacts 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, 2016</b>
	<b>(thousands of euros)</b>
Revenues	14,988
Expenses	7,082
Receivables	34,016
Payables	31,927

*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).

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.

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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 2016, our total revenues from roaming agreements with networks of the Designated Countries are detailed as follows:

	<b>Year ended December 31, 2016 (thousands of euros)</b>
Iran	26
Sudan	27
Syria	10
<b>Total revenues from roaming agreements</b>	<b>63</b>

In 2016, our total charges from roaming agreements with networks of the Designated Countries are detailed as follows:

<b>Year ended December 31, 2016 (thousands of euros)</b>
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Iran	687
Sudan	68
Syria	20

**Total charges from roaming agreements** **775**

As of December 31, 2016, our total receivables from roaming agreements with networks of the Designated Countries are detailed as follows:

	<b>As of December 31, 2016 (thousands of euros)</b>
Iran	646
Sudan	55
Syria	34

**Total receivables from roaming agreements** **735**

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As of December 31, 2016, our total payables from roaming agreements with networks of the Designated Countries are detailed as follows:

	<b>As of December 31, 2016 (thousands of euros)</b>
Iran	2,208
Sudan	65
Syria	67
<b>Total payables from roaming agreements</b>	<b>2,340</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***

As a rule 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 2016, our total revenues from traffic from networks located in the Designated Countries to our networks are detailed as follows:

	<b>Year ended December 31, 2016 (thousands of euros)</b>
Iran	355
Sudan	4,211
Syria	9,005
<b>Total revenues from traffic</b>	<b>13,571</b>

In 2016, our total charges from traffic to networks in the Designated Countries from our networks are detailed as follows:

	<b>Year ended December 31, 2016 (thousands of euros)</b>
Iran	993
Sudan	3,789
Syria	1,525
<b>Total charges from traffic</b>	<b>6,307</b>

As of December 31, 2016, our total receivables from traffic from networks located in the Designated Countries to our networks are detailed as follows:

	<b>As of December 31, 2016 (thousands of euros)</b>
Iran	4,811
Sudan	10,550
Syria	14,254
<b>Total receivables from traffic</b>	<b>29,615</b>

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As of December 31, 2016, our total payables from traffic to networks in the Designated Countries from our networks are detailed as follows:

	<b>As of December 31, 2016 (thousands of euros)</b>
Iran	5,370
Sudan	10,095
Syria	14,122
<b>Total payables from traffic</b>	<b>29,587</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.

In September 2016, TI Sparkle reached an agreement with the Iranian company Telecommunications Infrastructure Company (TIC) for the development of a Point of Presence of Sparkle Internet backbone in Iran and the provisioning of IP Transit services from Sparkle to TIC.

In 2016, our total revenues from Commercial Sale and Other Agreements with the Designated Countries are detailed as follows:

	<b>Year ended December 31, 2016 (thousands of euros)</b>
Iran	
Sudan	368
Syria	986
<b>Total revenues from commercial sale and other agreements</b>	<b>1,354</b>

As of December 31, 2016, our total receivables from Commercial Sale and Other Agreements with the Designated Countries are detailed as follows:

	<b>As of December 31, 2016 (thousands of euros)</b>
Iran	502
Sudan	382
Syria	2,782
<b>Total receivables from commercial sale and other agreements</b>	<b>3,666</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 technical definitions, but to assist the general reader to understand certain terms as used in this Annual Report.

**2G (second-generation Mobile System).** Second-generation protocols 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 protocols support voice and limited data communications. 2G networks technology offer auxiliary services such as data, fax and SMS. Most 2G protocols offer different levels of encryption.

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

**4G (fourth-generation Mobile System).** Fourth-generation protocols that are designed to provide, in addition to the usual voice and other services of 3G, mobile broadband Internet access, for example to laptops with wireless modems, to smartphones, and to other mobile devices. Potential and current applications include mobile web access, IP telephony, gaming services, high-definition mobile TV, video conferencing and cloud computing applications.

**5G (fifth-generation Mobile System).** 5G indicates the fifth generation of mobile network that will be introduced on market starting in 2020. At worldwide level, the ITU Commission (International Telecommunication Union) began to set out the first Standards on 5G future connectivity and the first field trials will be launched in 2018, during the Olympic Winter Games .

The main elements of the 5G network will be:

- bit-rate significantly higher than 4G (capacity up to 10 Gbit/s) to ensure greater efficiency and quality of service, such as video download and live streaming;
- possibility of connecting simultaneously to hundreds of thousands of objects (Internet of Things): wearable technologies, automatic systems for traffic control, assisted driving for vehicles, home automation;
- ultra-low latency (high-speed in data transmission in the order of milliseconds);
- ability to connect moving vehicles at higher speeds.

**Access charge.** Amount charged by national operators for the use of their network by operators of other networks. Also known as an interconnection charge .

**ADSL (Asymmetric Digital Subscriber Line).** Technology that, through a modem, transforms the traditional copper fixed line into 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.** An old transmission technology which is not digital, e.g., the representation of voice, video or other not in digital form.

**ATM.** Asynchronous Transfer Mode is 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 packed-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 are extended.

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**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) that wants to offer broadband services to their end customers.

**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 to 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 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 exchange. It has the task of supervising and controlling radio resources, both during the phase when a call or a data connection is being set up and during the maintenance phase.

**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 which sends the GSM radio signal via the antenna to cover an area (cell) and coordinates one or more radio transceivers (TRX).

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

**Carrier.** Company that makes available the physical telecommunication network.

**Carrier Aggregation.** Technology used in 4G mobile network which functions by aggregating radio carriers to increase the transmission speed.

**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 access used in radio communication for transmission between a mobile phone and a radio base station. First radio systems based on CDMA were developed by Qualcomm, and commercially introduced in 1995. It enables the simultaneous transmission and reception of several messages, each of



which has a coded identity to distinguish it from the other messages.

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

**Cellular.** A technique used in mobile radio technology to use the same spectrum of frequencies in one network multiple times. Low power radio transmitters are used to cover a cell (i.e., a limited area) so that the frequencies in use can be reused without interference for 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 medium and optical, electric, electromagnetic signals.

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**Closed User Group.** Groups of customers who can only make calls and receive calls or messages from members within the group and can have dedicated pricing.

**Community.** A group of people who have something 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 the network infrastructure in urban and rural areas.

**CPS (Carrier Pre-selection).** Permits a customer to pre-select his telecommunication operator without dialing an identifying code.

**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. Digital networks are rapidly replacing the older analog ones. They allow for higher capacity and higher flexibility through the use of computer-related technology for the transmission and manipulation of telephone calls. 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. 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 telecommunications equipment able to process digital signals of various clients and multiply them in a data link to the nodes of the Internet.

**DSL Network (Digital Subscriber Line Network).** A network built on existing telephone lines with DSL technology devices which use sophisticated modulation schemes to pack data onto copper wires for connections from a telephone switching station to a home or office.

**DTT (Digital Terrestrial TV).** Digital Terrestrial Television Broadcasting is a type of broadcasting technology that provides a more effective way of transmitting television services using a digital system instead of the existing analogue system.

**DVB H (Digital Video Broadcasting Handheld).** DVB H is a standard for the transmission of digital video optimized for mobile devices.

**DWDM (Dense Wavelength Division Multiplexing).** This is a technology for multiplying and transmitting optical signals with different wavelengths along a single optical fiber contemporaneously.

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

**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.

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**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 FTTH (Fiber to the Home), the fiber connection terminates inside the customer premises.

**FWA (Fixed Wireless Access).** FWA is a variant of wireless broadband, where a radio link is used in the access network instead of cable or fiber for the transmission of voice and data.

**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.

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

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

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

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

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

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

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

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

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

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

**ICT (Information and communication(s) technology).** Broad area concerned with information technology, telecommunications networking 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.

**Interactive.** A program that allows a user to change some aspect of the program.

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**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.

**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 system in which several services (e.g., voice and data) may be simultaneously transmitted end to end in digital form.

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

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

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

**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.

**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.

**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".

**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.

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**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, taxation, controlling network interfaces and acts as an interface with other networks.

**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.

**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.

**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, video, mobile.

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

**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

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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 twister-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.** Hiring outsiders to perform various telecommunications services, which may include planning, construction, or hosting of a network or specific equipment belonging to a company, and, ultimately, the management of entire telecommunications systems. Value-added applications may also be provided in various sectors.

**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.** 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. When a POP is within a specific local area, users can connect to the Internet by dialing a local phone number.

**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.** Under price-cap, a regulator sets a cap on the price that the regulated operator may charge for a given service or basket of services. Then it identifies the maximum price limit 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 radio resources, both during the call set-up phase and during the maintenance phase (for example, handover between different cells).

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**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.

**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.

**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.

**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.

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

**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.

**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.

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**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.

**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.

**VAS (Value Added Services).** Value Added Services provide a higher level of functionality than the basic transmission services offered by a telecommunications network for the transfer of information among its terminals, which include wired or wireless switched-circuit analog voice communications; direct unrestricted digital point-to-point service at 9,600 bit/s; packet switching (virtual call); direct broadband analog transmission of TV signals, and supplementary services, such as closed user groups; call waiting; collect calls; call forwarding, and identification of number called. Value Added Services provided by the network, the terminals or the specialized centers include message handling services (MHS) (which can be used, among other things, for commercial documents

in predetermined formats); electronic directories listing users, network addressees and terminals; e-mail; fax; teletext; videotext and videotelephone. Value Added Services could include also value added voice telephony services such as Freephone or Premium Rate Services.

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

**VDSL2 (Very-high-data-rate Digital Subscriber Line 2).** 2nd generation VDSL, able to achieve downstream speed in the range of hundreds of Mbps. Actual data rate however is largely dependent upon the distance between customer equipment and network equipment, e.g. for distances of some hundred meters the

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achievable rate is about 100 Mbps. For this reason network equipment is typically located in street cabinets, so to be closer to customers. Currently there are ongoing trials of so called eVDSL (enhanced VDSL) technologies that are able to achieve rates around 200 Mbps.

**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 is 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 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.

**WI-FI.** A service for wireless Internet connection and high speed access.

**Wi Max (Worldwide Interoperability for Microwave Access).** A technology that allows wireless access to broadband telecommunications networks. It is defined by the Wi MAX Forum, a global consortium 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 802.16-2004 standards for fixed access and IEEE.802.16e-2005 for fixed and mobile access.

**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, 2016 and 2015, property, plant and equipment owned and leased are detailed as follows:

	As of December 31, 2016				As of December 31, 2015			
	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	203	16	219	1.3	171	16	187	1.3
Civil and industrial buildings	509	1,835	2,344	14.3	444	1,880	2,324	15.6
Plant and equipment	11,709	365	12,074	73.9	10,909	284	11,193	75.3
Manufacturing and distribution equipment	38		38	0.2	41		41	0.3
Other	391	125	516	3.2	378	7	385	2.6
Construction in progress and advance payments	1,097	72	1,169	7.1	716	21	737	5.0
<b>Total</b>	<b>13,947</b>	<b>2,413</b>	<b>16,360</b>	<b>100.0</b>	<b>12,659</b>	<b>2,208</b>	<b>14,867</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, 2016, the Company owned a number of buildings located 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.

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

In particular, in 2015, the Company purchased five strategic buildings and two strategic buildings were acquired in 2016. Over the 2015-2016 period the Company renegotiated and/or renewed approximately 1,100 leases. Over half of the renegotiated property rental contracts were previously accounted for using the operating lease method, however, as a result of the changes to the relevant contracts, they have been recognized in the statement of financial position at December 31, 2016 using the financial method (Tangible assets held under finance leases).

We currently expect to complete the above-mentioned real estate project, in respect of the remaining medium and small properties, with the aim to get a reduction in rental costs in the next few months.

**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, 2016, the domestic fixed network had the following figures:

Central Offices	approximately 10,365
Switching areas	565
Gateway areas (TDM)	33
Aggregation areas	12
Copper network	114.4 million kilometers-pair <sup>4</sup>
Fiber optic access/carrier network	12.6 million kilometers-fiber
Long Distance VC4	5,250
Long Distance Lambda(l)	672 l at 1 Gbps, 62 l at 2.5 Gbps and 1,023 l at 10 Gbps
Broadband/ADSL network	9,666 Central Offices covered
Main PoP data networks	32

**Fixed Voice network.** The Fixed Voice Network dedicated to serving traditional voice (**TDM**) consists of 607 main local switches (**SGU**). Concerning the OLO interconnection, local switches are divided in 33 gateway areas.

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

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

In terms of cable infrastructures, the fixed network includes 114.4 million km of copper pairs, mainly in the distribution network, and also 12.6 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 5,250 VC-4 on the SDH Arianna, Phoenix, Phoebe, Kosmos networks. It supports also 672 lambda at 1 Gbps, 62 at 2.5 Gbps point to point optical channels and 1,023 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 2016, the xDSL services for residential and business customers (retail and wholesale) covers more than 99.3% of the population and have been extended to 7,687 towns, including S. Marino.

At the end of 2016, 9,666 local switching areas were covered by ADSL technology (compared to 9,597 at the end of 2015).

**NGAN (Next Generation Access Network).** In 2016 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 continued FTTCab deployment and initiated a project to bring FTTH to 50 cities by 2019 (and other 59 BUL<sup>5</sup> cities) 30 of which will be reached by 2018 and the other 20 by 2019, with the aim of improving ultrabroadband service to 200 Mbit/s and to 1 Gbit/s for FTTH.

More than 14,300,000 households had been reached by the end of 2016, mainly through approximately 2,900 distribution central offices. The NGAN coverage in FTTH/Cab was approximately 59% of reached households at the end of 2016 (the reached households in FTTH numbered more than 1,080,000, with a coverage of more than 4%).

At the end of 2016, 84,300 cabinets NGAN were reached with fiber optic cables (of which 70,240 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);
- LTE network (4G: fourth generation network).

<sup>5</sup> is an Italian acronym (Banda UltraLarga) referring to a public funding project aimed to development of ultrabroadband infrastructure.

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On December 31, 2016 TIM domestic mobile network had the following figures:

**GSM/EDGE network**

- 14,616 BTS (Base Transceiver Station) GSM radio station (18,085 BTS at the end of 2015): -19.2% due to the GSM@1800 MHz refarming towards new technologies (LTE); about 1,000 of them are  $\mu$ BTS;
- 719,594 radio channels (902,271 at the end of 2015), -20.3%;
- 97 BSC (Base Station Controller) (98 at the end of 2015), -1 due to the adoption of new generation equipment with superior performance;
- 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**

- 18,487 node B UMTS radio base station (17,245 node B at the end of 2015) +7.2%;
- 2,728,295 radio channels (2,541,383 radio channels at the end of 2015) +7.4%;
- 120 RNC (Radio Network Controller) (144 at the end of 2015): -24 RNC compared to 2015 due to the adoption of new generation equipment with superior performance;
- GSM/UMTS Core Network: 50 MSC-server (Mobile Switching Center/Gateway), 85 access MGW (Media Gateway), 13 transit MGW, 8 IP STP (Signalling Transfer Point), 6 TSC-server (Transit Switching Center), 42 HLR (Home Location Register), 4 GGSN (Gateway GPRS Support Node), 1 SGSN (Serving GPRS Support Node).

Note that decommissioning of SGSNs (-29 compared to end of 2015) is part of the ongoing convergence of Packet Switched Core Network onto the LTE EPC (Evolved Packet Core).

In 2016, 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 84% 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 has acquired a frequency block in the 1500 MHz band, specifically devoted to mobile ultrabroadband. In 2016, TIM has initiated deployment of this new layer.

At the end of 2016, the LTE network coverage is higher than 96% of the national population.

- 13,391 enode B (9,342 at the end of 2015) +43.3%;

- LTE core network is undergoing a technological upgrade and currently includes: 10 SPGW (Packet Data Network/Serving Gateway), 12 MME (Mobility Management Entity) all using triple access 2G/3G/4G technology, 3 HSS (Home Subscriber Server) Front End and 3 CUDB (Centralized User Database) according to Data Layered Architecture, 6 Mobile Broadband Policy Manager.

As of the end of 2016, the IMS core Network includes 3 CSCF (Call session Control Function), 3 MTAS (Multimedia Telephony Application Server) and 1 VoLTE Policy Manager for handling voice services on LTE (VoLTE).

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

Telecom Italia Sparkle provides connectivity services (voice, mobile data, IP and managed bandwidth) and Cloud and Data Center services (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.

Telecom Italia 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.

Telecom Italia 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 100 Gbps 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 2016, the new 100 Gbps optical backbone was deployed over the Paris Brussels Amsterdam, Paris-London, and London-Amsterdam routes. Upgrades at the 100Gbps level were carried out both on OTN ASON and OTN Light infrastructures for the provisioning of protected and unprotected capacity services across Italy and Europe, in line with the sales plan.

With respect to the network efficiency and decommissioning plan, old DWDM 2.5G and 10G technologies have been dismantled over the Milan-Vienna-Venice, Milan-Kehl-Frankfurt, Amsterdam-Brussels-Paris, Paris-Kehl, Paris-Lyon-Marseille-Milan, Paris-Bordeaux-Bilbao, Marseille-Barcelona, London-Amsterdam links. Additionally, the Bordeaux POP was decommissioned.

DWDM capacity upgrades were carried out on both Tuas-Equinix and Equinix-Ansar rings, to keep up with new sales.

With respect to the IP backbone, new core equipment was deployed in Milan (Caldera site), Palermo and Istanbul to further optimize capital expenditure efficiency, network scalability and resiliency. At the edge level, upgrades were made at 10/100Gbps on main PoPs in line with the sales plan and a new router was deployed in Frankfurt Equinix dedicated to IP over SDH services. In the US IP backbone, a new direct route between Dallas and Newark/New York was deployed, with the aim of increasing network architecture efficiency and optimizing capital expenditures, and a new edge router was deployed in Jacksonville Cologix.

New POPs were made available in London Equinix and in Kuala Lumpur through a partnership with a local operator. The Atlanta POP was decommissioned.

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With respect to submarine cables, Telecom Italia Sparkle is a co-owner of the new Sea-Me-We 5 cable brought into service in November of 2016, including the terrestrial ring from the landing station in Catania and Sicily Hub in Palermo. Capacity upgrade was delivered on Sea-Me-We 4 and SAT-3/WASC cables, connecting Europe with Singapore and Western Africa.

On the Mobile and Voice services front, Softswitch platform upgrades were completed to handle increasing signaling and voice traffic volumes, mainly to support voice and messaging services over IP. New SBC equipment was brought into service in Frankfurt PoP and the SMS Firewall platform was enhanced with additional capabilities, new SMS routing rules and reporting features.

**Mediterranean Backbone**

In 2016, TIM carried out an upgrade of the Haifa-Catania segment of MedNautilus submarine cable. Moreover, network upgrades on both transmission and IP backbones were completed, in line with the sales plan in the area.

Technical infrastructure updates were carried out in Catania, Athens, Chania and Istanbul data centers with the aim of increasing efficiency and reliability. The Company has started the building of a new data center in Catania, for the deployment of a new virtualized environment for network and IT technologies. Enhancements of cloud infrastructure in Athens and Istanbul, through new storage appliance purchased with a pay-as-you-grow model, and the launch of new Secure Cloud Identity Suite service in collaboration with AliasLAB partner, were also carried out in the period.

**Latin American Backbone**

Capacity upgrades on both the SAC (South American Crossing) cable and Sao Paulo backhaul were completed. With respect to IP backbone, upgrades at the 100Gbps level on Buenos Aires, Sao Paulo and Rio de Janeiro PoPs were completed, in line with the sales plan. In addition, replacement of the old technology core router in Buenos Aires POP was carried out by introducing state-of-the-art equipment with the aim of optimizing the capital expenditures. A new dark fiber, connecting Boca Raton landing station to Miami PoP, was bought in order to build a protected ring and to increase network resiliency.

***Brazilian Network***

The investments of TIM Brasil group prioritized projects for (i) the expansion of its fiber optic network (ii) the optimization of the use of the network, with adjustments to improve the signal quality in the current coverage areas and (iii) the mapping of the main causes of interruptions and failures of the network, as well as the necessary measures to prevent these events, ensuring call and data connection quality, for greater user access capability. As a provider of an essential service to the socioeconomic development of the country, TIM Brasil strongly believes that this is contributing to the country's infrastructure development and promoting universal access to telecommunications services.

Efficiency and quality were the main pillars of Network strategy in 2016. TIM Brasil was able to improve all quality metrics and provide an improved customer experience, in both 4G and 3G technologies, with fewer capital expenditures and maintaining its leadership in cities covered with 4G. Quality and level of coverage are fundamental to attracting and retaining customers as the Company evolves, primarily in the postpaid segment.

Coverage, capacity and quality constitute the main focus for the Network, with approximately 85% of total 2016 capital expenditures dedicated to infrastructure, to support total traffic that grew more than 56% during the year. Sites densification, hetnet coverage expansion, backhaul development and carrier aggregation were the main Network projects to support this growth with improved quality.

Aiming to provide a high quality experience in mobile broadband, the Company focused on the MBB (Mobile BroadBand) project in 2016, prioritizing investment allocation in most critical areas with high consumer densification. The project has allowed the Company to optimize data traffic, expanding and enhancing the services, with fewer capital expenditures. In 2016, the MBB project had 20 clusters, totaling 268 cities planned to be covered in 2016-2017. The cluster concept expands the targeted zones to metropolitan areas of cities that

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**Item 4. Information On The TIM Group**

**Description Of Property, Plant And Equipment**

were already included in the MBB project in 2015 prioritizing state capitals and their metropolitan areas, conurbation cities, major coastal cities and main primary access roads. The project has been evolving according to its program and the main clusters are already implemented.

During 2016, TIM Brasil maintained its leadership position in cities covered with 4G technology, reaching 1,255 cities or 74% of urban population in the country and more than tripling the number of cities covered as compared to 2015. TIM Brasil used spectrum refarming to achieve these significant 4G implementation results. The project uses the 1,800MHz band and reorganizes the frequency usage according to the spectrum availability together with coverage optimization, achieving better results with fewer capital expenditures.

As for the 3G network, TIM Brasil expanded its coverage to almost 1,000 new cities in 2016, a growth of approximately 55%, resulting in overall coverage of 2,833 cities or 89% of urban population. GSM coverage stood at almost 95% of urban population.

In 2016, the TIM Brasil group concluded the sale of two additional telecommunications towers to American Tower do Brasil. The transaction involved the simultaneous execution of a finance lease for the portion of the towers used by the TIM Brasil group.

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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 traffic are recorded on the basis of the minutes used at the contract price per minute. Deferred revenues for unused minutes 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 minutes 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.

**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.

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### **Item 5. Operating And Financial Review And Prospects**

### **Critical Accounting Policies And Estimates**

The purchase price allocation requires that all assets and liabilities be recorded at fair values which requires significant estimates and judgments to be made. A change in any of these estimates or judgments could change the amount allocated to the assets and liabilities. The resulting change in the purchase price allocation to assets or liabilities has a direct impact on the final amount of the purchase price that is allocated to goodwill.

If actual results differ from these estimates, or we adjust the estimated economic useful lives in future periods, 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).

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Future cash flows are estimated by referring to the current operating conditions of the cash generating unit (or group of cash-generating units) and, therefore, do not include either benefits originating from future restructuring for which the entity is not yet committed, or future investments for the improvement or optimization of the cash-generating unit.

For the purpose of calculating impairment, the carrying amount of the cash-generating unit is established based on the same criteria used to determine the recoverable amount of the cash-generating unit, excluding surplus assets (that is, financial assets, deferred tax assets and net non-current assets held for sale) and includes the goodwill attributable to non-controlling interests.

After conducting the goodwill impairment test for the cash-generating unit (or groups of cash-generating units), a second level of impairment testing is carried out which includes the corporate assets which do not generate positive cash flows and which cannot be allocated by a reasonable and consistent criterion to the single units. At this second level, the total recoverable amount of all cash-generating units (or groups of cash-generating units) is compared to the carrying amount of all cash-generating units (or groups of cash-generating units), including also those cash-generating units to which no goodwill was allocated, and the corporate assets.

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

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determine whether an impairment is other than temporary, we consider the ability and intent to hold the investment for a reasonable period of time to ascertain whether a forecasted recovery of fair value exceeds the carrying amount, including an assessment of factors such as the length of time and magnitude of the excess of carrying value over market value, the forecasted results of the investee company, the regional economic environment and state of the industry. Future adverse changes in market conditions, particularly a downturn in the telecommunications industry, or poor operating results could result in losses or an inability to recover the carrying amount of the investment, which could result in impairment charges.

**Derivative financial instruments**

We have entered into several different types of derivative contracts in order to manage our exposure to exchange rate and interest rate risks and to diversify the parameters of debt so that costs and volatility can be reduced to within pre-established operational limits. The changes in the fair value of derivatives which do not qualify for hedge accounting, fair value hedge derivatives and the ineffective portion of cash flow hedge derivatives are recognized in the separate consolidated income statement in the period of change. The gain or loss on the effective portion of qualifying cash flow hedges is recognized directly in a specific equity reserve. The cumulative gain or loss is removed from equity and recognized in the separate consolidated income statement at the same time the hedged transaction affects the separate consolidated income statement. The assessment of the fair value of a derivative contract requires the use of quoted market prices, banker price quotations, price quotations for similar instruments traded in different markets and, where applicable, pricing models. Pricing models and their underlying assumptions impact the amount and timing of unrealized gains and losses recognized. We rely on these pricing models when external fair values are unavailable. The estimates regarding future prices require estimating several factors, including interest rates, currency values and cash flows. Prices realized in the future could differ from these estimates, therefore producing different financial results.

**Provision for employee severance indemnity**

Employee severance indemnity, mandatory for Italian companies pursuant to art. 2120 of the Italian Civil Code, is a deferred compensation and is based on the employees' years of service and the compensation earned by the employee during the service period.

Under IAS 19 (*Employee Benefits*), the employee severance indemnity is considered a Defined benefit plan. From January 1, 2007, Italian Law provided employees with the choice to direct their accruing indemnity either to supplementary pension funds or leave the indemnity as an obligation of the Company. Companies that employ at least 50 employees should transfer the employee severance indemnity to the Treasury fund managed by INPS, the Italian Social Security Institute.

Consequently, the Group's obligation to INPS and the contributions to supplementary pension funds take the form, under IAS 19, of a Defined contribution plan.

The obligation for the employee severance indemnity classified as a defined benefit plan is determined in accordance with actuarial methods. In the event that changes in assumptions are required, the future amounts of the post-employment benefit may be materially affected. A critical assumption to this accounting is the discount rate. Other assumptions include factors such as expected retirement date, mortality rate and estimates of inflation.



**Provisions and contingent liabilities**

We exercise considerable judgment in determining our exposure to and recognizing provisions for contingent liabilities related to pending litigations or other outstanding claims subject to negotiated settlement, mediation, arbitration or government regulation as well as other contingent liabilities.

Judgment is necessary in assessing the likelihood that a pending claim will succeed or a liability will arise and to quantify the possible range of the final settlement. Provisions are recorded for liabilities when losses are considered probable and can be reasonably estimated. Because of the inherent uncertainties in making such judgments, actual losses may be different from the originally estimated amount recognized. Significant estimates

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are involved in the determination of provisions related to taxes, environmental liabilities, our workforce reduction initiative and litigation risks. These estimates are subject to change as new information becomes available, primarily with the support of internal specialists or outside consultants, such as actuaries or legal counsel. Adjustments to loss provisions may significantly affect future operating results.

**Income tax expense and deferred tax assets**

The Group calculates income tax expense in each of the tax jurisdictions in which it operates. This process involves a jurisdiction-by-jurisdiction calculation of the current tax charge and an assessment of temporary differences resulting from the different treatment of certain items for consolidated financial and tax reporting purposes. Temporary differences result in the recognition of deferred tax assets or liabilities in the consolidated financial statements. Deferred tax assets are recognized to the extent that their realization is probable. The realization of deferred tax assets depends, among other things, on the company's ability to generate sufficient taxable income in future years and the reversal of taxable temporary differences, taking into account any restrictions on the carry-forward of tax losses. Various factors are used to assess the probability of the future realization of deferred tax assets, including future reversals of existing taxable temporary differences, past operating results, operational plans, loss carry-forward periods, and tax planning strategies. If actual results differ from these estimates or, if these estimates must be adjusted in future periods, the financial position and results of operations may be affected. In the event of a change in the assessment of future utilization of deferred tax assets, the recognized deferred tax assets must be increased or decreased, as the case may be, and the consequent effects recognized in the separate consolidated income statement, except to the extent that they relate to items directly charged or credited to equity, in which case the related effect is recognized in the relevant equity reserves.

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**5.2 RESULTS OF OPERATIONS FOR THE THREE YEARS ENDED DECEMBER 31, 2016**

**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*

In 2016, the Italian TLC market confirmed the gradual slow-down in the fall in value, which had started in the second half of 2014, simultaneously with the reduction in price-based competitive pressures, that had characterized the previous years.

Growth in broadband and ultrabroadband particularly Mobile, also aided by the increased penetration of next-generation handsets continued to be the main driver of the market.

In order to address these underlying macro trends in our business, the main strategic priorities and objectives of TIM in the domestic (Italian) market are as follows:

- excellent network infrastructure, the roll out of which will be further accelerated over the Plan period;
- a commercial approach focused on convergent offers and content;
- in the Domestic Mobile segment, TIM will focus on speeding up the penetration of mobile ultrabroadband, strengthened by the extensive reach of its 4G network and the dissemination of quality content;
- in the Fixed Domestic segment, TIM plans to accelerate the spread and adoption of optic fiber;
- the implementation of efficiency recovery actions, aimed at increasing cash-flow generation;
- re-launch of the main subsidiaries of the Group.

*Brazil Business Unit*

The main macroeconomic indicators still show mixed signals in terms of recovery of the Brazilian economy. In particular, GDP decreased throughout 2016, with a slightly better forecast at year end than that recorded in 2015. Conversely, inflation in 2016 showed signs of improvement after the peak recorded in 2015 (+10.7%), but with year-end values still expected to remain at high levels (+6-7%).

In the course of 2016, direct taxation increased more than expected to cope with the increased budget deficit of the Federal and Central States, which also affected the telecommunications industry through a series of increases in the main tax on services (ICMS) recorded in almost all States.

### 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 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.

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Following the change in Persidera's business mission, the Media Business Unit was included into the Domestic Business Unit as of January 1, 2016;

- **Brazil:** includes mobile (TIM Celular) and fixed (TIM Celular and Intelig) telecommunications operations in Brazil;
- **Other Operations:** includes finance companies and other minor companies not strictly related to the core business of the TIM Group.

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

- **TIMVISION S.r.l. Domestic Business Unit:** established on December 28, 2016;
- **Noverca S.r.l. Domestic Business Unit:** 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 these 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.

The principal changes in the scope of consolidation in 2015 are as follows:

- **INWIT S.p.A. Domestic Business Unit:** was established in January 2015 and in June 2015 the initial public offering for the ordinary shares of INWIT S.p.A. on the Electronic Stock Exchange organized and managed by Borsa Italiana S.p.A. was successfully completed;
- **Alfabook S.r.l. Domestic Business Unit:** on July 1, 2015 Telecom Italia Digital Solutions S.p.A. (now merged into Olivetti S.p.A) acquired 100% of Alfabook S.r.l., which consequently entered the Group's scope of

consolidation;

- **TIM Real Estate S.r.l. Domestic Business Unit:** was established in November 2015. On February 3, 2017, as part of the programme to streamline the Company's holdings, the Board of Directors approved the start of the process to incorporate the wholly owned subsidiary Tim Real Estate S.r.l. into TIM. The Company expects to complete the incorporation process by mid-2017.

With the exception of the INWIT initial public offering, 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, 2015.

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

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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. Our management monitors the Net Financial Debt and leverage or similar measures as reported by other telecommunications operators in Italy and outside Italy, and by other major listed companies in Italy, in order to assess our liquidity and financial structure relative to such companies. We also monitor the trends in our Net Financial Debt and leverage in order to optimize the use of internally generated funds versus funds from third parties. Net Financial Debt is reported in our Italian Annual Report to shareholders and is used in presentations to investors and analysts. Net Financial Debt is calculated as follows:

	<b>As of December 31,</b>				
	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>
	<b>(millions of euros)</b>				
Non-current financial liabilities	30,469	30,518	32,325	31,084	34,091
Current financial liabilities	4,056	6,224	4,686	6,119	6,150
Financial liabilities directly associated with Discontinued operations/Non-current assets held for sale		348	43	27	
<b>Gross financial debt (A)</b>	<b>34,525</b>	<b>37,090</b>	<b>37,054</b>	<b>37,230</b>	<b>40,241</b>
<b>Non-current financial assets (B)</b>	<b>(2,698)</b>	<b>(2,989)</b>	<b>(2,445)</b>	<b>(1,256)</b>	<b>(2,496)</b>
<b>Current financial assets:</b>					
Securities other than investments	(1,519)	(1,488)	(1,300)	(1,348)	(754)
Financial receivables and other current financial assets	(389)	(352)	(311)	(283)	(502)
Cash and cash equivalents	(3,964)	(3,559)	(4,812)	(5,744)	(7,436)
<b>Total current financial assets (C)</b>	<b>(5,872)</b>	<b>(5,399)</b>	<b>(6,423)</b>	<b>(7,375)</b>	<b>(8,692)</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>(8,570)</b>	<b>(8,615)</b>	<b>(9,033)</b>	<b>(9,288)</b>	<b>(11,188)</b>
<b>Net financial debt (A+E)</b>	<b>25,955</b>	<b>28,475</b>	<b>28,021</b>	<b>27,942</b>	<b>29,053</b>

**5.2.4 OVERVIEW OF 2016 RESULTS OF OPERATIONS**

In 2016, the TIM Group successfully managed a turnaround, launched in April 2016, that resulted in a significant recovery of the main economic and financial indicators and enabled the Company to meet predefined targets.

The following characterized the results in the Italian (domestic) market:

**Domestic.** In the domestic market, TIM achieved revenue stabilization and significant improvement in operating profit. These results were achieved through a cost containment program and collateral innovations in TIM's range of products and services, from increasing ultrabroadband coverage to boosting sales of smartphones and enabling higher value added services.

The following characterized the results in our Brazil Business Unit:

**Brazil.** In the Brazil market there were signs of recovery, with progressive improvements, supported by the cost containment program and the re-positioning of commercial offers.

The completion of the sale of the Sofora-Telecom Argentina group in March 2016 and the conversion of the Mandatory Convertible Bond into TIM shares in November 2016 supplemented cash flow from operations and led to a decrease in the Group's net financial debt by more than 2.5 billion euros.



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The following table sets forth our consolidated income statement for the years ended December 31, 2016, 2015 and 2014.

	Year ended December 31,		
	2016 (* )	2015 (* ) (Revised)	2014 (* ) (Revised)
	(millions of euros)		
Revenues	19,025	19,719	21,574
Other income	311	287	401
<b>Total operating revenues and other income</b>	<b>19,336</b>	<b>20,006</b>	<b>21,975</b>
Acquisition of goods and services	(7,793)	(8,532)	(9,432)
Employee benefits expenses	(3,106)	(3,589)	(3,119)
Other operating expenses	(1,083)	(1,491)	(1,175)
Change in inventories	9	(44)	(52)
Internally generated assets	639	656	588
Depreciation and amortization	(4,291)	(4,135)	(4,284)
Gains (losses) on disposals of non-current assets	14	336	29
Impairment reversals (losses) on non-current assets	(3)	(244)	(1)
<b>Operating profit (loss)</b>	<b>3,722</b>	<b>2,963</b>	<b>4,529</b>
Share of profits (losses) of associates and joint ventures accounted for using the equity method	(23)	1	(5)
Other income (expenses) from investments	7	10	16
Finance income	2,543	2,760	2,404
Finance expenses	(3,450)	(5,281)	(4,594)
<b>Profit (loss) before tax from continuing operations</b>	<b>2,799</b>	<b>453</b>	<b>2,350</b>
Income tax expense	(880)	(403)	(930)
<b>Profit (loss) from continuing operations</b>	<b>1,919</b>	<b>50</b>	<b>1,420</b>
Profit (loss) from Discontinued operations/Non-current assets held for sale	47	611	541
<b>Profit (loss) for the year</b>	<b>1,966</b>	<b>661</b>	<b>1,961</b>
<b>Attributable to:</b>			
<i>Owners of the Parent</i>	<i>1,808</i>	<i>(70)</i>	<i>1,351</i>
<i>Non-controlling interests</i>	<i>158</i>	<i>731</i>	<i>610</i>

(\*) 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.

#### **5.2.5 BUSINESS UNIT FINANCIAL DATA**

The table below sets forth revenues, operating profit (loss), capital expenditures and number of employees by Business Units, for the periods indicated.

Following certain correction of errors made in 2016 within the Brazil Business Unit, the data for the years 2015 and 2014 have been appropriately adjusted and referred to as revised (for further details please see the Note *Form, Content and other general information The correction of errors* of the Notes to the 2016 Consolidated Financial Statements included elsewhere in this Annual Report ).

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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 in 2016 would have totaled 14,933 million euros.

			Domestic	Brazil	Media	Operations	Adjustments Other and eliminations	Consolidated Total
			(millions of euros, except number of employees)					
Revenues (1)							(39)	
	2016		15,006	4,047			11	19,025
	2015	(Revised)	15,001	4,637	82		49	19,719
	2014	(Revised)	15,303	6,245	71		(45)	21,574
Operating profit (loss)							(18)	(4)
	2016		3,376	368			(52)	3,722
	2015	(Revised)	2,359	638	14			2,963
	2014	(Revised)	3,738	794	6		(12)	4,529
Capital expenditures on an accrual basis								
	2016		3,709	1,167	8			4,876
	2015		3,900	1,289				5,197
	2014		2,783	2,195	6			4,984
Number of employees at year-end (2)								
	2016		51,280	9,849			100	61,229
	2015		52,644	13,042	64		117	65,867
	2014		53,076	12,841	89		19	66,025

(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, 2016 compared with Year Ended December 31, 2015**

**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.

	Year ended December 31,		Year ended December 31,		Changes	
	2016	% of	2015	% of	(a-b)	%
	Revenues <sup>(1)</sup>	Consolidated	Revenues <sup>(1)</sup>	Consolidated		
	(a)	revenues	(b)	revenues		
	(millions of euros, except percentages)					
Domestic <sup>(2)</sup>	15,006	78.9	15,001	76.1	5	0.0
Core Domestic <sup>(3)</sup>	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 <sup>(4)</sup>	11	0.1	131	0.7	(120)	
Adjustments and eliminations	(39)	(0.3)	(50)	(0.3)	11	
<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.

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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)
Release of provisions and other payable items	45	75	(30)	(40.0)
Other income	113	63	50	79.4
<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%).

**v OPERATING EXPENSES**

Operating expenses amounted to 15,614 million euros in 2016, a decrease of 1,429 million euros, or 8.4% compared to 17,043 million euros in 2015.

The components of our operating expenses include the following:

- **Acquisition of goods and services** amounted to 7,793 million euros in 2016, a decrease of 739 million euros compared to 2015 (8,532 million euros). 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)	%

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

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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)	%
<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		15	
<b>Total employee benefits expenses Outside Italy</b>	<b>362</b>	<b>374</b>	<b>(12)</b>	<b>(3.2)</b>
<b>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 in 2016 amounted to 3,106 million euros compared to 3,589 million euros, a decrease of 483 million euros. 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 expenses of overall 94 million euros, of which 75 million euros essentially relate to the start of the managerial restructuring plan linked to the ongoing revision of the company 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).



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

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (a-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). 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)
TLC operating fees	373	342	31	9.1
Indirect duties and taxes	100	116	(16)	(13.8)
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>	<i>5.7</i>	<i>7.6</i>		

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

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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) %	
	(millions of euros, except percentages)			
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>	<i>22.6</i>	<i>21.0</i>		

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 amounted to 3 million euros in 2016 (244 million euros in 2015) 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 the year 2015 they referred to a goodwill impairment loss in the Brazil Business Unit for 240 million euros and to 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** was 3,722 million euros in 2016 (2,963 million euros in 2015), an increase of 759 million euros, or +25.6%, with an operating profit margin of 19,6% (15,0% in 2015, +4,6 percentage points), 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.

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In detail:

(millions of euros)	Year ended	
	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>

(\*) For further details, please see 5.2.8 Year Ended December 31, 2015 compared with Year Ended December 31, 2014 included elsewhere in this Annual Report.

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

In 2016, the item was negative by 23 million euros and mainly related to the loss of the investment in Alfiere S.p.A. In 2015, the item was positive and amounted to 1 million euros.

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

In 2016, the item amounted to a positive 7 million euros, including mainly dividends distributed by Emittenti Titoli to TIM S.p.A. In 2015, this item showed a positive balance of 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 (negative for 454 million euros 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 amounted to 880 million euros, an increase of 477 million euros on 2015 (403 million euros), mainly related to the higher taxable base of the Parent TIM.

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In 2016, this item amounted to a positive 47 million euros (611 million euros in 2015), and was related to:

- the positive contribution (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.

**5.2.7 RESULTS OF OPERATIONS OF BUSINESS UNITS FOR THE YEAR ENDED DECEMBER 31, 2016 COMPARED WITH THE YEAR ENDED DECEMBER 31, 2015****v DOMESTIC**

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) is 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 TIMVision, the Group's own platform of services. Within this framework, Persidera plays an important role in supporting the development of TIMVision 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>
	<b>(millions of euros, except percentages and employees)</b>			
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 in 2016 amounted to 15,006 million euros, increasing slightly compared to 2015 (+5 million euros) due to the structural improvement recorded during the year, which resulted in a turnaround in the third and fourth



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quarters with a positive growth rate compared to the same periods of the previous year (+2.5% in the fourth quarter, +1.0% in the third quarter, compared with -1.2% and -2.3% respectively in the second and first quarter). Revenues from services also showed a recovery and improvement trend in particular the Mobile segment, which recorded a positive growth rate in all quarters with a limited decrease on the previous year of -180 million euros (-1.3%), less than that recorded in 2015 (-276 million euros, down 1.9% compared to 2014). 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.

In more detail:

- revenues from services in the Mobile business amounted to 4,579 million euros, an increase of 63 million euros compared to the previous year (+1.4%); this was a continuation of the steady growth seen in previous quarters (+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), in particular, the last quarter benefited from the launch of innovative offers during the fall campaign, further impetus to the spread of 4G coverage and services and optimal pricing strategy, aimed, on the one hand, to appropriately respond to commercial pressures on the low-spending segment and, on the other, to ensure 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 as best-in-class in the field, while the Mobile Number Portability balance improved, moving into positive territory (+26 thousand in the fourth quarter of 2016 compared to -44 thousand in the third quarter of 2016);
- revenues from Fixed-line services in 2016 amounted to 9,965 million euros a decline of 407 million euros compared to 2015 (-3.9%); the decline was driven by the decline in revenues from voice services (-533 million euros due to the loss of traditional accesses, but with a recovery trend compared to previous periods), only partially offset by continued growth in the broadband and ultrabroadband customer base which is driving growth in innovative connectivity services (+158 million euros in 2016, +6.8%). These results were also significantly affected by the reduction in regulated prices of some wholesale services. The 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 (+125 thousand in the fourth quarter), with an NGN customer base of approximately 1 million.

Revenues from product sales, including the change in work in progress, amounted to 1,128 million euros in 2016, significantly improving on 2015 (+185 million euros), 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)
<i>Consumer</i>	7,389	7,271	118	1.6
<i>Business(2)</i>	4,535	4,745	(210)	(4.4)
<i>Wholesale</i>	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.

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(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 of 2016 amounted to 7,389 million euros, an increase of 118 million euros compared to the previous year (+1.6%). This positive result was driven by the trend of structural 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 amounted to 3,759 million euros and showed a significant and steady increase relative to 2015 (+161 million euros, +4.5%). Revenues from services increased by 101 million euros (+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 amounted to 3,584 million euros, decreasing 125 million euros compared to 2015 (-3.4%). Revenues, however, showed signs of recovery in the last quarter of 2016 compared to other 2016 quarters (+2.0 in the fourth quarter, -3.2% in the third quarter, -6.0% in the second quarter, -6.0% in the first quarter). 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 amounted to 4,535 million euros, decreasing 210 million euros compared to 2015 (-4.4%), of which 193 million euros (-4.5%) attributable to the services component and 18 million euros (-3.7%) attributable to equipment and products component.

In particular:

revenues from Mobile services fell by 45 million euros (-4.0% on the previous year). Specifically, the continuing decline in traditional 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 the positive performance of new digital services (+4.4% compared to 2015). The fourth quarter, however, showed a reversal of the trend with significant recovery in performance (+2.2% in the fourth quarter, -4.4% in the third quarter, -5.6% in the second quarter, -7.9% in the first quarter);

- revenues from Fixed-line services fell by 118 million euros (-3.7% compared to the previous year), despite the steady growth in revenues from ICT services (+3.1%), particularly for Cloud services. Indeed, 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 in 2016 amounted to 1,780 million euros, declining relative to 2015 (-47million euros, -2.6%). 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.

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- **International Wholesale Telecom Italia Sparkle group**

	Year ended December 31,			
	2016 (a)	2015 (b)	Changes (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 totaled 1,351 million euros, an increase on 2015 (+37 million euros, +2.8%). The result is due to the increase in revenues from Voice services (+34 million euros, +3.7%), while the performance of the other business lines was substantially stable.

**Operating profit**

Operating profit in 2016 amounted to 3,376 million euros (2,359 million euros in 2015), an increase of 1,017 million euros, or +43.1% compared to 2015, with an Operating profit margin of 22.5% (+15.7% 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)	%
	(millions of euros, except percentages)			
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;

- **employee benefits expenses** amounted to 2,759 million euros in 2016, a decrease of 447 million euros compared to 2015, due to the same factors that affected the employee benefits expenses at Group level;
- **other operating expenses** amounted to 574 million euros in 2016, fell by 425 million euros compared to 2015, 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)			
Writedowns 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)	(4)
Indirect duties and taxes	94	100	(6)	(6.0)
Sundry expenses	109	337	(228)	(68)
<b>Total</b>	<b>574</b>	<b>999</b>	<b>(425)</b>	<b>(42.5)</b>

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- **depreciation and amortization**, amounted to 3,310 million euros in 2016, an increase of 105 million euros compared to 2015 (3,205 million euros, +3.3%) .

**Employees**

Employees were 51,280 as of December 31, 2016, a reduction of 1,364 units 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,		Year ended December 31,		Changes	
	2016	2015 (Revised)	2016 (a)	2015 (Revised) (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 for 2016 amounted to 15,617 million reais, a decrease of 1,525 million reais (-8.9%) compared to 2015. Service revenues totaled 14,720 million reais, a decrease of 667 million reais compared to 15,387 million reais for 2015 (-4.3%). Mobile Average Revenue Per User (ARPU) was 18.0 reais for 2016, compared to 16.7 reais in the previous year (+7.8%).

The Business Unit's total number of lines at December 31, 2016 was 63.4 million, representing a decrease of 2.8 million (-4.3%) compared to December 31, 2015; the market share at the end of December 2016 was 26.0% (25.7% at December 31, 2015).

Revenues from product sales came to 897 million reais (1,755 million reais in 2015; -48.9%), reflecting a commercial policy less focused on the sale of handsets, in addition to the impact of the Brazilian macroeconomic crisis on household spending.

The performance of the fourth quarter of 2016 confirms the recovery already observed in the third quarter, both in terms of total revenues, amounting to 4,043 million reais (-1.7% compared to -5.2% in the third quarter, -12.4% in the second quarter and -15.3% in the first quarter) and of service revenues, which amounted to 3,842 million reais (-0.7% compared to -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 amounted to 1,418 million reais, down by 940 million reais compared to 2015. This result was affected by the effect of higher depreciation and amortization (+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.



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With regard to changes in operating costs, the following table sets forth certain expenses for the years ended December 31, 2016 and 2015.

	2015		2015		Changes	
	2016	(Revised)	2016	(Revised)	(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 decrease, for all components compared to 2015 (-1,207 million reais; -13.4%);
- **employee benefits expenses**, increased (+7 million reais; +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** amounted to 1,948 million reais, an increase of 212 million reais (+12.2%) which were especially affected by the increase in TLC operating fees and charges;
- **depreciation and amortization** amounted to 3,785 million reais in 2016, an increase of 423 million reais compared to 3,362 million reais in 2015 due to the effect of the acceleration of investments in the past two years.

**Employees**

Employees were 9,849 units at December 31, 2016, a decrease of 3,193 units compared to December 31, 2015 (13,042 units).

\* \* \*

**Agreement for the sale of telecommunication towers**

On November 21, 2014, TIM Celular agreed to enter 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 (6,481 telecommunication towers) for a total value of around 3 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 2016, the fourth and fifth partial sale of 336 towers was completed at a price of approximately 134 million reais, corresponding to around 35 million euros. The final realized gain, already net of transaction costs, was 44 million reais (around 12 million euros at the 2016 average exchange rate). The amount of non-current assets reacquired under finance leases came to 93 million reais (around 24 million euros at the 2016 average exchange rate).

In 2016, finance leases were also taken out on newly-built towers for 15 million reais (about 4 million euros), as already envisaged in the contractual arrangements of November 21, 2014 with American Tower.

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

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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		<b>1.1-3.8 2016</b>	<b>Year ended December 31, 2015</b>
(millions of euros)			
<b>Revenues</b>		504	3,943
<b>Operating profit (loss)</b>		133	1,035
Finance income (expenses), net		(42)	(94)
<b>Profit (loss) before tax from Discontinued operations/Non-current assets held for sale</b>		91	941
Income tax expense		(32)	(320)
<b>Profit (loss) after tax from Discontinued operations/Non-current assets held for sale</b>	(A)	59	621
Other minor entries	(B)		(10)
<b>Profit (loss) from Discontinued operations/Non-current assets held for sale</b>	(C=A+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)	
	(D)	(12)	
<b>Profit (loss) from Discontinued operations/Non-current assets held for sale</b>	(C+D)	<b>47</b>	<b>611</b>
Attributable to:			
<i>Owners of the Parent</i>		(3)	89
<i>Non-controlling interests</i>		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.

**5.2.8 YEAR ENDED DECEMBER 31, 2015 COMPARED WITH YEAR ENDED DECEMBER 31, 2014**

Following certain corrections of errors made in 2016 within the Brazil Business Unit, the data for the years 2015 and 2014 have been appropriately adjusted and referred to as revised (for further details please see the Note *Form, Content and other general information* The correction of errors of the Notes to the 2016 Consolidated Financial Statements included elsewhere in this Annual Report ).

Data relating to other Business Units are historical, therefore they do not take into account the changes occurred in 2016 for Persidera and Olivetti. As a result of this:

- as of January 1, 2016, the Media Business Unit was included into the Domestic Business Unit (Core Domestic);
- the company Olivetti, previously a separate Cash Generating Unit under Domestic Business Unit, from January 1, 2016 is part of the Core Domestic Cash Generating Unit under Domestic Business Unit.

v **REVENUES**

**Revenues** declined by 1,855 million euros, or 8.6%, from 21,574 million euros in 2014 to 19,719 million euros in 2015.

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

	2015 (Revised)		Year ended December 31, 2014 (Revised)		Changes	
	Revenues(1) (a)	% of Consolidated revenues (b)	Revenues(1) (b)	% of Consolidated revenues	(a-b)	%
	(millions of euros, except percentages)					
Domestic	15,001	76.1	15,303	70.9	(302)	(2.0)
Core Domestic	13,858	70.27	14,205	65.8	(347)	(2.4)
International Wholesale	1,314	6.7	1,244	5.8	70	5.6
Olivetti	172	0.9	227	1.1	(55)	(24.2)
Brazil	4,637	23.5	6,245	28.9	(1,608)	(25.7)
Media and Other Operations (2)	131	0.7	71	0.3	60	84.5
Adjustments and eliminations	(50)	(0.3)	(45)	(0.1)	(5)	11.1
<b>Total Revenues</b>	<b>19,719</b>	<b>100.0</b>	<b>21,574</b>	<b>100.0</b>	<b>(1,855)</b>	<b>(8.6)</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) 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.

The **Domestic Business Unit** (divided into Core Domestic, International Wholesale and Olivetti), recorded a decline in revenues for 2015 of 302 million euros (-2.0%), compared to 2014, but with an improvement in revenues from services (changes in each quarter of 2015, relative to the corresponding quarter of 2014, were: fourth quarter -1.1%, third quarter -1.5%, second quarter -1.7%, first quarter -3.3%). There were, however, positive signs over the course of 2015, with the decline in revenues, as compared to 2014, becoming smaller from quarter to quarter. This development is mainly due to an improvement in competition conditions, which permitted for an acceleration of growth for connection and content services for broadband and ultrabroadband networks, a steady hold on market share and a steady reduction in the declines of ARPU with respect to traditional services, mainly in the Mobile segment, which posted a positive performance in the fourth quarter of 2015, both in terms of total revenues (+0.7%) and revenues from services (+0.1%), as compared to the same period of 2014.

In 2015, the **Brazil Business Unit** generated revenues of 4,637 million euros (17,142 million reais), a decline of 1,608 million euros (2,360 million reais), or -25.7%, from 6,245 million euros in 2014 (19,502 million reais). The decline was mainly due to a decline in revenues from services, which was caused by further reductions in mobile termination rates and a contraction in revenues from traditional voice and SMS services. These declines were only

partially offset by an increase in revenue generated by the innovative component.

Furthermore, revenues from product sales were 475 million euros in 2015 (1,755 million reais) compared to 1,016 million euros in 2014 (3,173 million reais), a decrease of 541 million euros, or 53.2%, likely reflecting the impact of the Brazilian macroeconomic crisis.

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The following table sets forth other income for the years ended December 31, 2015 and 2014:

	Year ended December 31,		Changes	
	2015 (Revised) (a) (millions of euros, except percentages)	2014 (Revised) (b)	(a-b)	%
Late payment fees charged for telephone services	59	64	(5)	(7.8)
Recovery of employee benefit expenses, purchases and services rendered	32	27	5	18.5
Capital and operating grants	33	26	7	26.9
Damage compensations, penalties and sundry recoveries	25	36	(11)	(30.6)
Release of provisions and other payable items	75	132	(57)	(43.2)
Other income	63	116	(53)	(45.7)
<b>Total other income</b>	<b>287</b>	<b>401</b>	<b>(114)</b>	<b>(28.4)</b>

Total other Income declined by 114 million euros relative to 2014. In 2014, total other income included the full release of the remaining risk provisions, for an amount of 84 million euros, already allocated in the 2009 consolidated financial statements, with respect to the alleged administrative offense pursuant to Legislative Decree 231/2001, in connection with the Telecom Italia Sparkle affair .

**v OPERATING EXPENSES**

Our operating expenses amounted to 17,043 million euros in 2015, a decrease of 403 million euros, or 2.3% compared to 17,446 million euros in 2014.

The components of our operating expenses include the following:

- **Acquisition of goods and services** amounted to 8,532 million euros in 2015, a decrease of 900 million euros compared to 2014 (9,432 million euros). The decline was mainly due to the Brazil Business Unit, which experienced a decline of 1,153 million euros (including a negative exchange rate effect of 559 million euros). The Domestic Business Unit, on the other hand, reported an increase of 215 million euros, mainly due to higher purchases of equipment and handsets, related to the increase of product sales. In 2015, this item also included approximately 102 million euros for special projects and agreements.

The following table sets forth the acquisition of goods and services for the years ended December 31, 2015 and 2014:

	Year ended December 31,			
	2015 (Revised) (a)	2014 (Revised) (b)	Changes (a-b) %	
	(millions of euros, except percentages)			
Purchase of goods	1,811	2,231	(420)	(18.8)
Portion of revenues to be paid to other operators and interconnection costs	2,080	2,403	(323)	(13.4)
Commercial and advertising costs	1,398	1,475	(77)	(5.2)
Power, maintenance and outsourced services	1,272	1,336	(64)	(4.8)
Rent and leases	699	742	(43)	(5.8)
Other service expenses	1,272	1,245	27	2.2
<b>Total acquisition of goods and services</b>	<b>8,532</b>	<b>9,432</b>	<b>(900)</b>	<b>(9.5)</b>
<i>% on Revenues</i>	<i>43.3</i>	<i>43.7</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.



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The following table sets forth employee benefits expenses for the years ended December 31, 2015 and 2014:

	Year ended December 31,		Changes	
	2015 (Revised) (a) (millions of euros, except percentages)	2014 (Revised) (b)	(a-b)	%
<b>Employee benefits expenses Italian companies:</b>				
Ordinary employee expenses and costs	2,769	2,697	72	2.7
Corporate restructuring expenses	446	8	438	n.s.
<b>Total employee benefits expenses Italy</b>	<b>3,215</b>	<b>2,705</b>	<b>510</b>	<b>18.9</b>
<b>Employee benefits expenses Outside Italy</b>				
Ordinary employee expenses and costs	374	410	(36)	(8.8)
Corporate restructuring expenses		4	(4)	
<b>Total employee benefits expenses Outside Italy</b>	<b>374</b>	<b>414</b>	<b>(40.0)</b>	<b>(9.7)</b>
<b>Total employee benefits expenses</b>	<b>3,589</b>	<b>3,119</b>	<b>470</b>	<b>15.1</b>
<i>% on Revenues</i>	<i>18.2</i>	<i>14.5</i>		

Employee benefits expenses in 2015 totaled 3,589 million euros compared to 3,119 million euros in 2014, an increase of 470 million euros. The change was due to:

an increase of 72 million euros in the Italian component of ordinary employee expenses, mainly due to the increased contractual minimums established in the TLC National Collective Labor Agreement signed on February 1, 2013, which resulted in the addition of pay-scale points in April and October 2014, and the growth in the average workforce by 1,842 employees compared to 2014. In particular, the Solidarity Contracts applied by the Parent and T.I. Information Technology (now merged in TIM) which entailed a reduction in working hours and a reduction in the average workforce came to an end in April 2015, resulting in an increase of 2,062 average employees compared to 2014;

the recognition for 446 million euros of charges and provisions to Employee Benefits and other minor items. In particular, the Parent and other Group companies signed specific agreements with the trade unions in 2015 for the application of regulatory instruments that, from 2016 and subsequent years, will enable the management of personnel surpluses, resulting from the streamlining processes affecting all the companies operating in the TLC sector. These instruments will be implemented through solidarity contracts, with

voluntary early retirement (in application of Article 4, paragraphs 1-7ter of law no. 92 of June 28, 2012, the Fornero law ) and through the use of mobility scheme under law no. 223/91. These expenses consisted of 422 million euros for the Parent TIM S.p.A., 17 million euros for the restructuring plan announced in May 2015 by Olivetti, 3 million euros for the company TI Information Technology (now merged in TIM), 2 million euros for HR Services, and 2 million euros for 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;

a decrease of 40 million euros in the component outside Italy of employee benefits expenses due to the higher increase in labor costs related to the growth in the average workforce (+426 average employees) and local salary increases, which were more than offset by a negative exchange rate effect of approximately 59 million euros, essentially relating to the Brazil Business Unit. In 2014, restructuring expenses of 4 million euros were also recognized in relation to a number of foreign companies of the Olivetti group.

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

	Year ended December 31,			
	2015 (a)	2014 (b)	Changes (a-b)	%
	(full time equivalent units, except percentages)			
Average salaried workforce Italy	49,361	47,519	1,842	3.9
Average salaried workforce Foreign	12,192	11,766	426	3.6
<b>Total average salaried workforce(1)</b>	<b>61,553</b>	<b>59,285</b>	<b>2,268</b>	<b>3.8</b>
Non-current assets held for sale (Sofora Telecom Argentina group)	15,465	15,652	(187)	(1.2)
<b>Total Average salaried workforce including Non-current assets held for sale (Sofora Telecom Argentina group) (1)</b>	<b>77,018</b>	<b>74,937</b>	<b>2,081</b>	<b>2.8</b>

(1) Includes the average employees with temporary work contracts: 3 units in 2015 (2 in Italy and 1 outside Italy). In 2014 average employees with temporary work contracts were 9 units (4 in Italy and 5 outside Italy).

The Group's employees at December 31, 2015 and 2014 were as follows:

	As of December 31,			
	2015 (a)	2014 (b)	Changes (a-b)	%
	(units, except percentages)			
Employees Italy	52,555	52,882	(327)	(0.6)
Employees Foreign	13,312	13,143	169	1.3
<b>Total Employees (1)</b>	<b>65,867</b>	<b>66,025</b>	<b>(158)</b>	<b>(0.2)</b>
Non-current assets held for sale (Sofora Telecom Argentina group)	16,228	16,420	(192)	(1.2)
<b>Total Employees including Non-current assets held for sale (Sofora Telecom Argentina) (1)</b>	<b>82,095</b>	<b>82,445</b>	<b>(350)</b>	<b>(0.4)</b>

(1) Includes employees with temporary work contracts: 3 units at December 31, 2015 and 9 units at December 31, 2014.

**Other operating expenses**

The following table sets forth other operating expenses for the years ended December 31, 2015 and 2014.

	Year ended December 31,			
	2015 (Revised) (a) (millions of euros, except percentages)	2014 (Revised) (b)	Changes (a-b) %	
Writedowns and expenses in connection with credit management	345	375	(30)	(8.0)
Provision charges	330	84	246	292.9
Indirect duties and taxes	116	118	(2)	(1.7)
TLC operating fees	342	449	(107)	(23.8)
Penalties, compensation and administrative sanctions	292	68	224	329.4
Association dues and fees, donations, scholarships and traineeships	18	18		
Sundry expenses	48	63	(15)	(23.8)
<b>Total other operating expenses</b>	<b>1,491</b>	<b>1,175</b>	<b>316</b>	<b>26.9</b>
<i>% on Revenues</i>	<i>7.6</i>	<i>5.4</i>		

Other operating expenses were 1,491 million euros in 2015, compared to 1,175 million euros in 2014, an increase of 316 million euros. This change was mainly due to 518 million euros for provisions and costs

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connected to regulatory disputes and sanctions, and liabilities related to these disputes, charges for specific transactions with customers and suppliers and costs related to disputes with former employees.

In particular:

- write-downs and expenses in connection with credit management (345 million euros; 375 million euros in 2014) consisting of 270 million euros for the Domestic Business Unit (295 million euros in 2014) and 62 million euros for the Brazil Business Unit (80 million euros in 2014);
- provision charges (330 million euros; 84 million euros in 2014) mainly consisting of 236 million euros for the Domestic Business Unit (6 million euros in 2014) and 86 million euros for the Brazil Business Unit (74 million euros in 2014);
- TLC operating fees and charges (342 million euros; 449 million euros in 2014) consisting of 285 million euros for the Brazil Business Unit (399 million euros in 2014) and 56 million euros for the Domestic Business Unit (49 million euros in 2014).

· **Depreciation and Amortization**

The following table sets forth depreciation and amortization for the years ended December 31, 2015 and 2014.

	Year ended December 31,			
	2015 (Revised) (a)	2014 (Revised) (b)	Changes (a-b) %	
	(millions of euros, except percentages)			
Amortization of intangible assets with a finite useful life	1,788	1,854	(66)	(3.6)
Depreciation of tangible assets owned and leased	2,347	2,430	(83)	(3.4)
<b>Total depreciation and amortization</b>	<b>4,135</b>	<b>4,284</b>	<b>(149)</b>	<b>(3.5)</b>
<i>% on Revenues</i>	<i>21.0</i>	<i>19.9</i>		

The reduction in depreciation and amortization of 149 million euros was mainly attributable to the Domestic Business Unit (-85 million euros), which was affected by the revision of the useful lives of the passive infrastructure of the Mobile Base Transceiver Stations, which resulted in an overall impact of 51 million euros of lower depreciation, and to the Brazil Business Unit (-68 million euros, which includes the negative exchange rate effects of 152 million euros). Net of the exchange rate effect, the depreciation and amortization of the Brazil Business Unit would have increased by 85 million euros.

Further details are provided in the Note Tangible assets (owned and under finance leases) of the Notes to the Consolidated Financial Statements, included elsewhere herein.

· **Gains (losses) on disposals of non-current assets**

In 2015, this item amounted to 336 million euros (29 million euros in 2014) and was mainly attributable to the gain realized by the Brazil Business Unit of 1,211 million reais (approximately 328 million euros) following the conclusion of the sale of the first three tranches of telecommunications towers to American Tower do Brasil.

For further details, please see 5.2.9 Results of Operations of Business Units for the Year Ended December 31, 2015 Compared with the Year Ended December 31, 2014 Brazil included elsewhere in this Annual Report.

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

This item amounted to 244 million euros in 2015 (1 million euros in 2014).

The impairment losses for the year 2015 included:

- 240 million euros with respect to goodwill of the Brazil Business Unit due to the results of the impairment testing conducted at December 31, 2015, carried out by comparing the recoverable amount of the Brazil Cash Generating Unit (CGU) with its carrying amount on the same date;
- 4 million euros for other items.

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

**v OPERATING PROFIT (LOSS)**

**Operating profit** was 2,963 million euros in 2015 (4,529 million euros in 2014), a decrease of 1,566 million euros, or -34.6%, as a result of operating income and expenses described above.

In particular, in 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)	Year ended December 31, 2015
<b>Acquisition of goods and services and Change in inventories</b>	
Expenses related to agreements and development of specific projects	112
<b>Employee benefits expenses</b>	
Expenses related to restructuring and rationalization	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	518
Gain from Brazil Towers disposal	(328)
Brazil goodwill impairment loss	240
Impairment losses on tangible assets	2
<b>Impact on Operating profit</b>	<b>990</b>

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

This item amounted to a positive 10 million euros in 2015 (a positive 16 million euros in 2014), essentially reflecting the gain from the sale of the non-controlling interest in SIA S.p.A., which took place in July 10, 2015.

**v FINANCE INCOME (EXPENSES)**

Finance income (expenses) showed an increase in net expenses of 331 million euros, from 2,190 million euros in 2014 to 2,521 million euros in 2015.

This increase was linked to the effects of the changes in certain non-monetary items of a valuation and accounting nature, linked in particular to derivatives and of bond buybacks, which were offset by the reduction in finance expenses connected to the related debt position.

In particular:

- the negative impact of 454 million euros (174 million euros in 2014) 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. );
- a negative effect of 379 million euros in relation to the bond buybacks carried out during 2015 by TIM S.p.A. for a total of 3.8 billion euros. This impact resulted from the difference between the buyback prices and the values of the liabilities at the transaction date, net of the benefits from the termination of several hedging derivatives linked to the bonds repurchased. In 2014, the negative impact of the buybacks carried out during the period and the exercise of the early redemption option for a bond amounted to 62 million euros.



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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**

This item amounted to 403 million euros, a decrease of 527 million euros compared to 2014 (930 million euros), mainly due to lower taxable income of the Parent and the unexpected full deductibility of labor costs from the IRAP tax base introduced by art. 1, c. 20 of the Stability Law 2014 (law n.190/14) which resulted in lower IRAP of approximately 60 million euros.

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

In 2015, the item Profit from Discontinued Operations/Non-current assets held for sale amounted to 611 million euros (541 million euros in 2014) and was mainly related to the positive contribution to the consolidation from the Sofora Telecom Argentina group.

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.

**5.2.9 RESULTS OF OPERATIONS OF BUSINESS UNITS FOR THE YEAR ENDED DECEMBER 31, 2015 COMPARED WITH THE YEAR ENDED DECEMBER 31, 2014**

Following certain corrections of errors made in 2016 within the Brazil Business Unit, the data for the years 2015 and 2014 have been appropriately adjusted and referred to as revised (for further details please see the Note *Form, Content and other general information The correction of errors* of the Notes to the 2016 Consolidated Financial Statements included elsewhere in this Annual Report).

Data relating to other Business Units are historical, therefore they do not take into account the changes occurred in 2016 for Persidera and Olivetti. As a result of this:

- as of January 1, 2016, the Media Business Unit was included into the Domestic Business Unit (Core Domestic);
- the company Olivetti, previously a separate Cash Generating Unit under Domestic Business Unit, from January 1, 2016 is part of the Core Domestic Cash Generating Unit under Domestic Business Unit.

**v DOMESTIC**

The following table sets forth, certain financial and other data for the Domestic Business Unit for the years ended December 31, 2015 and 2014.

	<b>Year ended December 31,</b>			
	<b>2015</b>	<b>2014</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	15,001	15,303	(302)	(2.0)
Operating profit (loss)	2,359	3,738	(1,379)	(36.9)
% of Revenues	<i>15.7</i>	<i>24.4</i>		
Employees at year-end (units)	52,644	53,076	(432)	(0.8)

### Revenues

Revenues decreased by 302 million euros from 15,303 million euros in 2014 to 15,001 million euros in 2015.

There were a number of significant indicators during the year 2015 and the last quarter, including the continued steady recovery in revenue performance, which strengthened compared to the previous quarters, and positive performance in the Mobile business, both in terms of total revenues (+0.7% in the fourth quarter of 2015) and revenues from services only (+0.1% in the last quarter of 2015 compared to the same period of 2014).

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This recovery in revenues was attributable to the commercial actions aimed at progressively stabilizing the customer base with market share up slightly in both the Mobile and Fixed-line Broadband businesses and the ARPU, with a growth in revenues from Fixed-line Broadband, ICT and Mobile Internet.

In more detail:

**Revenues from domestic services**, amounted to 14,058 million euros in 2015 and decreased by 276 million euros (-1.9%) compared to 2014.

The quarterly trend confirmed the recovery trend already mentioned, stronger than in previous quarters: (quarters 2015 compared to quarters 2014: fourth quarter -1.1%, third quarter -1.5%, second quarter -1.7%, first quarter -3.3%).

In detail:

- revenues from Fixed-lined services amounted to 10,372 million euros in 2015, a decrease of 300 million euros compared to 2014 (-2.8%);
- revenues from services in the Mobile business amounted to 4,517 million euros a decrease of 91 million euros compared to 2014 (-2.0%). The performance contributed to the improving trend with a positive +0.1% in the fourth quarter of 2015, compared to the same period in 2014, preceded by -1.5% in the third quarter of 2015, -2.5% in the second quarter of 2015, -4.2% in the first quarter of 2015.

**Revenues from product sales**, including changes to work in progress, amounted to 943 million euros in 2015 (a decrease of 26 million euros compared to 2014) and grew by 68 million euros in the Mobile business, due to a continued growth in demand for advanced handsets (smartphones), and declined in the Fixed-line business of the product portfolio.

The following table sets forth the Domestic Business Unit s revenues by market segment for the years ended December 31, 2015 and 2014.

· **Core Domestic**

	Year ended December 31,			
	2015 (a)	2014 (b)	Changes (a-b)	%
	(millions of euros, except percentages and employees)			
Revenues	13,858	14,205	(347)	(2.4)
Consumer	7,267	7,349	(82)	(1.1)
Business	4,600	4,824	(224)	(4.6)

<i>National Wholesale</i>	1,785	1,793	(8)	(0.4)
<i>Other</i>	206	239	(33)	(13.8)
Operating profit (loss)	2,287	3,593	(1,306)	(36.3)
<i>% of Revenues</i>	16.5	25.3		
Employees at year-end (units)	51,741	51,849	(108)	(0.2)

- **Consumer:** revenues of the Consumer segment amounted to 7,267 million euros in 2015, with a decrease of 82 million euros (-1.1%) compared to 2014, with a recovery driven, in particular, by the progressive and structural recovery in the Mobile business, due to the steady market share and the stabilization of ARPU levels. In particular:
  - **revenues from Mobile business** amounted to 3,599 million euros, and grew slightly compared to 2014 (+29 million euros, +0.8%), confirming the positive trend seen over the two consecutive quarters (fourth quarter of 2015, +2.5%, third quarter +3.3%, second quarter -1.6%, first quarter -1.5%). Service revenues decreased by 39 million euros (-1.2% compared to 2014), also evidencing a significant recovery trend (fourth quarter of 2015: +1.5%; third quarter: -0.3%; second quarter: -2.1%; first quarter: -4.3%), attributable to a slowdown of competitive pressure, the progressive stabilization of market share and the steady growth of mobile internet and digital services to support the stabilization of ARPU;

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- **revenues from Fixed-line business** amounted to 3,705 million euros, with a decrease of 112 million euros compared to 2014 (-2.9%) and showed a slowdown in the last quarter of 2015 (-6.7%) compared to the improvement seen from the second half of 2014, due to the actions aimed at increasing ARPU undertaken in the last months of the year (repricing, introduction of flat tariffs and bundle development).
- **Business:** the revenues of the Business segment amounted to 4,600 million euros, a decrease of 224 million euros compared to 2014 (-4.6%). Revenues from services (4,232 million euros, -204 million euros compared to 2014) continued the stabilization that began during 2014 (-4.7% in the fourth quarter of 2015). Specifically:
  - **Mobile services revenue** fell by 66 million euros (-5.5% compared to 2014): the positive performance of new digital services, and, in particular, of the Mobile Internet component (+38 million euros, +9% compared to 2014) was offset by a reduction in traditional mobile services for voice calls and messaging (-109 million euros) due to the customers repositioning towards bundle deals with lower overall ARPU;
  - **Fixed-line services revenue** fell by 141 million euros (-4.3% compared to 2014): despite the steady growth in ICT service revenues (+5.7%), in particular on Cloud services (+26% compared to 2014), the segment continued to be adversely affected by the slow economic recovery, the reduction in prices of traditional voice and data services, and the technological shift towards VoIP systems.
- **National Wholesale:** revenues for the Wholesale segment in 2015 amounted to 1,785 million euros, essentially stable compared to 2014 (-8 million euros, or 0.4%). Indeed, the impact of the change in regulated prices in 2015 was similar to the impact in 2014, due to the retroactive change in the wholesale access prices for the period 2010-2012.
- **International Wholesale**

	<b>Year ended December 31,</b>			
	<b>2015</b>	<b>2014</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	1,314	1,244	70	5.6
Operating profit	85	172	(87)	(50.6)
<i>% of Revenues</i>	<i>6.5</i>	<i>13.8</i>		
Employees at year-end (units)	645	641	4	0.6

Telecom Italia Sparkle group revenues for 2015 amounted to 1,314 million euros, a significant increase compared to 2014 (+70 million euros, or 5.6%). This increase was related in particular to revenues for Voice services (+39 million euros, +4.3%) and revenues for IP/Data services (+33 million euros, +12.8%). The other business segments remained

substantially stable (-2 million euros, -2.2%).

· **Olivetti**

Following approval of the restructuring plan of the Olivetti group on May 11, 2015, in 2015, the business lines to be abandoned through divestment or termination in accordance with the plan have no longer been consolidated under Olivetti. Instead, these lines have been included under Other Operations.

	Year ended December 31,			
	2015 (a)	2014 (b)	Changes (a-b)	%
	<b>(millions of euros, except percentages and employees)</b>			
Revenues	172	227	(55)	(24.2)
Operating profit (loss)	(13)	(34)	21	61.8
<i>% of Revenues</i>	<i>(7.6)</i>	<i>(15.0)</i>		
Employees at year-end (units)	258	586	(328)	(55.9)

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In 2015, the revenues of business lines defined as Core (Office, Retail and Systems, and Advanced Caring) amounted to 172 million euros.

In particular, in 2015 there was an increase in revenues in the Office segment relating to the sales of multifunctional products under long-term rental agreements (+15 million euros compared to 2014), while revenues from services in the Advanced Caring segment registered an increase of 6 million euros as compared to 2014.

**Operating profit**

Operating profit in 2015 amounted to 2,359 million euros (3,738 million euros in 2014), a decrease of 1,379 million euros, or -36.9% compared to 2014, with an Operating profit margin of 15.7% (24.4% in 2014).

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,			
	2015 (a)	2014 (b)	Changes (a-b) %	
	(millions of euros, except percentages)			
Acquisition of goods and services	6,046	5,831	215	3.7
Employee benefits expenses	3,206	2,730	476	17.4
Other operating expenses	999	570	429	75.3
Depreciation and amortization	3,205	3,290	(85)	(2.6)

In detail:

- **acquisition of goods and services** increased by 215 million euros (+3.7%) compared with 2014. In particular:
  - higher costs for the acquisition of goods for resale (+145 million euros, of which +78 million euros for the acquisition of Mobile handsets linked to the increase in sales volumes);
  - higher advertising costs (+25 million euros, mainly related to the sponsoring of EXPO 2015 and the launch of the new single Brand);
  - higher commercial costs (+24 million euros);
  - higher costs for revenues due to other operators (+26 million euros);

- lower costs for indirect operating expenses, not directly linked to commercial and industrial policies (-117 million euros);
  
- **employee benefits expenses** increased by 476 million euros compared to 2014, mainly due to:
  - an increase of 60 million euros in ordinary employee expenses, mainly due to the increased contractual minimums established in the TLC National Collective Labor Agreement signed on February 1, 2013, which resulted in the addition of pay-scale points in April and October 2014, and the growth in the average workforce by a total of 1,691 average employees compared to 2014. In particular, the Solidarity Contracts applied by the Parent and T.I. Information Technology (now merged into TIM) which entailed a reduction in working hours and a consequent reduction in the average workforce came to an end in April 2015, resulting in an increase of 2,062 average employees compared to 2014;
  
  - the recognition of 429 million euros in charges and provisions to employee benefits, consisting of 422 million euros for the Parent TIM S.p.A., 3 million euros for Telecom Italia Information Technology, 2 million euros for HR Services and 2 million euros for Telecom Italia Sparkle. In particular, in 2015 the Parent signed specific agreements with the trade unions for the application of regulatory instruments that starting in 2016 will enable the management of personnel surpluses, resulting from the streamlining processes affecting the companies operating in the TLC sector. These instruments will be implemented through solidarity contracts, voluntary early retirements (in application of Article 4, paragraphs 1-7ter, of Law no. 92 of June 28, 2012, the Fornero law) and through the use of mobility scheme under law n. 223/91;



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- **other operating expenses**, amounted to 999 million euros, an increase of 429 million euros compared to 2014. This increase was mainly due to costs totaling 512 million euros for provisions and costs connected to regulatory disputes and sanctions, and to liabilities related to these disputes, some charges for specific transactions with customers and suppliers and costs related to disputes with former employees.

Details of other operating expenses are shown in the table below:

	Year ended December 31,			
	2015 (a)	2014 (b)	Changes (a-b)	%
(millions of euros, except percentages)				
Writedowns and expenses in connection with credit management	270	295	(25)	(8.5)
Provision charges	236	6	230	n.s.
TLC operating fees and charges	56	49	7	14.3
Indirect duties and taxes	100	99	1	1.0
Sundry expenses	337	121	216	178.5
<b>Total</b>	<b>999</b>	<b>570</b>	<b>429</b>	<b>75.3</b>

- **depreciation and amortization**, amounted to 3,205 million euros in 2015, a decrease of 85 million euros compared to 2014 (3,290 million euros), due to the revision of the useful lives of the passive infrastructure of the Mobile Base Transceiver Stations.

The operating profit was also impacted by **Other income** which amounted to 258 million euros in 2015 (382 million euros in 2014), a decrease of 124 million euros compared to 2014. In 2014, the amount included the entire release of the risk provision, recorded in the 2009 Consolidated Financial Statements for the alleged administrative offense pursuant to Legislative Decree 231/2001, linked to the so-called Telecom Italia Sparkle affair (71 million euros).

**Employees**

Employees were 52,644 as of December 31, 2015, a reduction of 432 units compared to December 31, 2014.

\* \* \*

The company Infrastrutture Wireless Italiane S.p.A. ( **INWIT** ) was established on January 14, 2015. On April 1, 2015, the Parent TIM S.p.A. transferred to INWIT the business unit consisting of around 11,500 sites in Italy that house the radio transmission equipment for mobile telephone networks for the Parent Company and other operators. In June 2015, an IPO was successfully completed for ordinary shares of INWIT S.p.A. on the Electronic Stock Exchange organized and managed by Borsa Italiana S.p.A., which was followed in July 2015 by the exercise of the greenshoe option. This transaction did not result in a loss of control for the TIM Group over INWIT and was therefore treated as a transaction between shareholders in accordance with the accounting standards. Accordingly, no impacts were recognized in the consolidated income statement and the effects of the transaction were recognized directly as an

increase in Equity attributable to Owners of the Parent.

		<b>As of December 31, 2015</b>
<b>INWIT Infrastrutture Wireless Italiane S.p.A.</b>		
Set of towers transferred from TIM to INWIT	No.	11,500
Number of shares in the IPO	No.	239,800,000
% of capital transferred		39.97%
IPO unit price per share	euro	3.65
Total consideration received, net of transaction costs	million euros	854
Increase in Equity attributable to Owners of the Parent	million euros	279
TIM percentage interest in INWIT at December 31, 2015		60.03%

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The following table sets forth certain financial and other data for the Brazil Business Unit for the years ended December 31, 2015 and 2014.

	Year ended December 31,				Changes	
	2015 (Revised)	2014 (Revised)	2015 (Revised) (a)	2014 (Revised) (b)	(a-b)	%
	(millions of euros, except percentages and employees)		(millions of Brazilian reais, except percentages and employees)			
Revenues	4,637	6,245	17,142	19,502	(2,360)	(12.1)
Operating profit	638	794	2,358	2,480	(122)	(4.9)
<i>% of Revenues</i>	<i>13.8</i>	<i>12.7</i>	<i>13.8</i>	<i>12.7</i>		
Employees at year-end (units)	13,042	12,841	13,042	12,841	201	1.6

**Revenues**

Revenues for 2015, amounted to 17,142 million reais and decreased by 12.1% compared to 2014 (-2,360 million reais).

Service revenues totaled 15,387 million reais, a decrease of 942 million reais compared to 16,329 million reais for 2014 (-5.8%). The decline in revenues was partly attributable to the revenues from incoming SMS and mobile traffic, due to the reduction in the mobile termination rate (MTR) and lower volumes, as well as traditional voice and SMS outgoing traffic. This was partially offset by an increase in revenue generated by the innovative component, mobile data and VAS content.

Revenues from product sales were 1,755 million reais (3,173 million reais in 2014; -44.7%), likely reflecting the impact of the Brazilian macroeconomic crisis.

The total number of lines as of December 31, 2015 amounted to 66,234 thousand, a decrease of 9,487 thousand compared to December 31, 2014. This corresponds to a market share of approximately 25.7% (27% at December 31, 2014).

**Operating profit**

Operating profit amounted to 2,358 million reais, down 122 million reais compared to 2014. This result was affected by goodwill impairment losses totaling 887 million reais and the positive impacts arising from the conclusion of the sale of the first three tranches of telecommunications towers to American Tower do Brasil. More specifically, at the time of the sales, the gains arising on the assets sold amounted to 1,211 million reais net of transaction costs.

With regard to changes in operating costs, the following table sets forth certain expenses for the years ended December 31, 2015 and 2014.

	Year ended December 31,					
	2015	2014	2015	2014	Changes	
	(Revised)	(Revised)	(Revised)	(Revised)	(a-b)	%
	(millions of euros)		(a)	(b)	(millions of Brazilian reais, except percentages)	
Acquisition of goods and services	2,443	3,596	9,033	11,229	(2,196)	(19.6)
Employee benefits expenses	349	379	1,289	1,183	106	9.0
Other operating expenses	470	597	1,736	1,865	(129)	(6.9)
Change in inventories	33	11	122	33	89	269.7
Depreciation and amortization	909	977	3,362	3,049	313	10

- **acquisition of goods and services** amounted to 9,033 million reais in 2015 (11,229 million reais in 2014), a decrease of 2,196 million reais;

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- **employee benefits expenses**, amounting to 1,289 million reais in 2015, up 106 million reais compared to 2014 (+9.0%). The ratio of employee benefits expenses to total revenues rose to 7.5%, up 1.4 percentage point on 2014. The average workforce grew from 11,451 employees in 2014 to 11,931 employees in 2015;
- **other operating expenses** amounted to 1,736 million reais, a decrease of 6.9% on 2014. The expenses were broken down as follows:

	Year ended December 31,			
	2015 (Revised) (a) (millions of Brazilian reais, except percentages)	2014 (Revised) (b)	Changes (a-b) %	
Writedowns and expenses in connection with credit management	230	249	(19)	(7.6)
Provision charges	320	232	88	37.9
TLC operating fees	1,054	1,247	(193)	(15.5)
Indirect duties and taxes	51	51		
Sundry expenses	81	86	(5)	(5.8)
<b>Total</b>	<b>1,736</b>	<b>1,865</b>	<b>(129)</b>	<b>(6.9)</b>

- **depreciation and amortization** amounted to 3,362 million reais in 2015, an increase of 313 million reais compared to 3,049 million reais in 2014 due to the effect of the acceleration of investments in the past two years.

**Employees**

Employees were 13,042 at December 31, 2015, an increase of 201 units compared to December 31, 2014 (12,841 units).

\* \* \*

In 2015, the TIM Brasil group concluded the sale of the first three tranches of telecommunications towers to American Tower do Brasil. The transaction involved the simultaneous execution of a finance lease for the portion of the towers used by the TIM Brasil group, recorded as a financial debt for leases.

**v MEDIA**

On June 30, 2014, Telecom Italia Media (TI Media) and Gruppo Editoriale L'Espresso (Espresso group) completed the merger of the digital terrestrial network operator businesses respectively controlled by Persidera S.p.A. (a subsidiary of TI Media) and Rete A S.p.A.

The merger of Rete A by absorption into Persidera was completed on December 1, 2014.

The merger of Telecom Italia Media S.p.A. into TIM S.p.A. was completed on September 30, 2015, effective retroactively, for accounting and tax purposes, as of January 1, 2015.

The table below shows the figures for the Media Business Unit which, for the first half of 2014, did not include the results of Rete A.

	<b>Year ended December 31,</b>			
	<b>2015</b>	<b>2014</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	82	71	11	15.5
Operating profit (loss)	14	6	8	n.s.
<i>% of Revenues</i>	<i>17.1</i>	<i>8.5</i>		
Employees at year-end (units) (*)	64	89	(25)	(28.1)

(\*) Includes employees with temp work contracts: nil at December 31, 2015, 1 at December 31, 2014.

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

Revenues amounted to 82 million euros in 2015, an increase of 11 million euros (+15.5%) compared to 71 million euros in 2014. This change, which was partly driven by the merger of Rete A, which had not yet occurred in the first six months of 2014, was entirely attributable to the Network Operator (Persidera).

**Operating profit (loss)**

Operating profit was 14 million euros in 2015 (6 million euros in 2014). This performance was mainly due to the aforementioned increase in revenues, as well as the increase in other income, only partially offset by an increase in operating expenses, mainly attributable to the costs from the former Rete A (operations not present in the first six months of 2014) and by the increase of 4 million euros in depreciation and amortization.

**Employees**

Employees were 64 at December 31, 2015, a decrease of 25 units compared to December 31, 2014 (89 units).

**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 having received the approval of Enacom, the Argentine communications regulator.

The results of the Sofora Telecom Argentina group, which were classified under Discontinued operations/Non-current assets held for sale following the agreement for the sale to Fintech entered into on November 13, 2013 and subsequently amended on October 24, 2014, are shown below. Specifically, following those agreements:

- the first closing took place on October 29, 2014 and, as a result, 17% of the Sofora capital was sold. Consideration was received for this closing also including other related assets totaling US\$ 215.7 million (around 170 million euros); this resulted in the direct and indirect economic interest in Telecom Argentina group of the TIM group being reduced from 19.30% to 14.47%;
  - the sale of the controlling interest of 51% in the capital of Sofora was planned to occur within two and a half years of October 29, 2014, subject to approval by the Argentine regulatory authority;
  - the guarantees of performance by Fintech were secured by a pledge of securities worth US\$ 600.6 million.
- The average exchange rate used for the conversion into euro of the Argentine peso (expressed in terms of units of local currency per 1 euro) was 10.26890 in 2015 and 10.76605 in 2014. In terms of the spot exchange rate, the Argentine currency was subject to a significant devaluation in December 2015: the euro exchange rate for the Argentine peso on December 31, 2015 was 14.0972 pesos per euro compared to 10.2755 pesos per euro at December 31, 2014.

The following table sets forth certain financial and other data for the Sofora Telecom Argentina group for the years ended December 31, 2015 and 2014.

	Year ended December 31,				Changes	
	2015	2014	2015 (a)	2014 (b)	(a-b)	%
	<b>(millions of euros, except percentages and employees)</b>		<b>(millions of Argentine pesos, except percentages and employees)</b>			
Revenues	3,943	3,097	40,495	33,341	7,154	21.5
Operating profit	1,035	804	10,632	8,657	1,975	22.8
<i>% of Revenues</i>	26.2	26.0	26.3	26.0		
Employees at year-end (units)	16,228	16,420	16,228	16,420	(192)	(1.2)

### Revenues

Revenues for 2015 amounted to 40,495 million pesos, increasing 7,154 million pesos (+21.5%) compared to 2014 (33,341 million pesos), mainly due to the growth in ARPU. The main source of revenues was mobile telephony, which accounted for about 73% of the consolidated revenues of the Sofora Telecom Argentina group, an increase of 20.1% compared to 2014.



Table of Contents**Item 5. Operating And Financial Review And Prospects Results Of Operations For The Three Years Ended December 31, 2015****Operating profit**

Operating profit in 2015 was 10,632 million pesos compared to 8,657 million pesos recorded in 2014. The increase of 1,975 million pesos was mainly attributable to the aforementioned increase in revenues, partially offset by the increase in the related costs, as described below.

With regard to the change in the main costs, the following is noted:

- **acquisition of goods and services** amounted to 19,017 million pesos (14,963 million pesos in 2014). The increase of 27.1% compared to 2014 (+4,054 million pesos) was mainly due to higher external service costs of 1,912 million pesos and greater purchases of goods of 2,025 million pesos;
- **employee benefits expenses**, amounting to 7,317 million pesos, increased by 1,662 million pesos compared to 2014 (+29.4%). The change was due to salary increases resulting from periodic revisions in union agreements, primarily linked to inflation, and to the increase in provisions for termination benefit incentives. The percentage of employee benefits expenses to total revenues was 18.1%, up 1.1 percentage points over 2014;
- **changes in inventories** totaled 1,460 million pesos and reflecting higher purchases of handsets by Telecom Personal, mentioned above, with an increase of 62% in stock levels compared to the end of 2014;
- **other operating expenses** amounted to 4,835 million pesos, increasing 797 million pesos compared to 2014, mainly as a result of the 540 million pesos increase in indirect duties and taxes;
- **net impairment losses on non-current assets** of 224 million pesos in 2015, as compared to 26 million pesos in 2014, were mainly related to work in progress and several business projects that the group decided not to pursue. As required by IFRS 5, the calculation of the depreciation and amortization for the Sofora Telecom Argentina group, which would have amounted to 4,438 million pesos in 2015 and 3,244 million pesos in 2014 (432 million euros in 2015 and 301 million euros in 2014), was suspended effective as of the date of classification as a Discontinued operation.

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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**Item 5. Operating And Financial Review And Prospects**

**Liquidity And Capital Resources**

**5.3 LIQUIDITY AND CAPITAL RESOURCES**

The TIM Group's policy is to manage financial risks (market risk, credit risk and liquidity risk) by defining, at a central level, guidelines for directing operations, identifying the most appropriate financial instruments to meet pre-determined objectives, monitoring the results achieved and excluding the use of financial instruments for speculative purposes.

TIM has a centralized Finance Department which operates in the interests of the entire Group:

- allocating liquidity where necessary;
- obtaining excess cash resources from the Group companies;
- guaranteeing an adequate level of liquidity compatible with individual needs;
- supporting its subsidiaries to gain access to the loan market; and
- providing financial consulting services to its subsidiaries.

These activities reduce the Group companies' need to seek bank lines and enable those companies to obtain better conditions from the banking system by constantly monitoring cash flows and ensuring a more efficient use of liquidity in excess of requirements.

Furthermore, the TIM Group has a centralized financial risk management policy for market, credit and liquidity risks. For additional details on funding and treasury policies and risk policies reference should be made to the Note Financial Assets (non-current and current) and Note Financial risk management of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The TIM Group's goal is to achieve an adequate level of financial flexibility which is expressed by maintaining a treasury margin (composed by cash and cash equivalents, marketable securities and undrawn committed credit lines) to cover refinancing requirements at least for the next 12-18 months.

**5.3.1 LIQUIDITY**

TIM Group's primary source of liquidity is cash generated from operations and its principal use of funds are the payment of operating expenses, capital expenditures and investments, the servicing of debt and the payment of dividends to shareholders.

For additional details, reference should be made to the Note Financial Assets (non-current and current) of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The table below summarizes, for the periods indicated, the TIM Group's cash flows.

	Year ended December 31,		
	2016	2015	2014
	(Revised)	(Revised)	(Revised)
	(millions of euros)		
Cash flows from (used in) operating activities	5,706	5,070	5,197
Cash flows from (used in) investing activities	(3,964)	(5,385)	(5,710)
Cash flows from (used in) financing activities	(1,263)	(902)	(273)
Cash flows from (used in) Discontinued operations/Non-current assets held for sale (*)	(45)	(19)	(499)
<b>Aggregate cash flows (A)</b>	<b>434</b>	<b>(1,236)</b>	<b>(1,285)</b>
<b>Net cash and cash equivalents at beginning of the year (**) (B)</b>	<b>3,216</b>	<b>4,910</b>	<b>6,296</b>
<b>Net foreign exchange differences on net cash and cash equivalents (C)</b>	<b>302</b>	<b>(458)</b>	<b>(101)</b>
<b>Net cash and cash equivalents at end of the year (**) (D=A+B+C)</b>	<b>3,952</b>	<b>3,216</b>	<b>4,910</b>

(\*) For further details please see the Note "Discontinued operations/non-current assets held for sale" of the Consolidated Financial Statements included elsewhere in this Annual Report.

(\*\*) For further details please see the Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014 of the Consolidated Financial Statements included elsewhere in this Annual Report.

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***Cash flows from operating activities.*** Cash flows from operating activities were 5,706 million euros in 2016, 5,070 million euros in 2015 and 5,197 million euros in 2014.

**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); and
- 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 (4,291 million euros in 2016 compared to 4,135 million euros in 2015).

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);
-

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).

**2015 compared to 2014**

The decrease of 127 million euros in 2015 compared to 2014 was mainly attributable to:

- a decrease in profit (loss) from continuing operations of 1,370 million euros (a profit of 50 million euros in 2015 compared to a profit of 1,420 million euros in 2014);
- a negative effect of net change in current income tax receivables/payables equal to 340 million euros (a net source of 13 million euros in 2015 compared to a net source of 353 million euros in 2014);
- a negative effect of losses (gains) realized on disposals of non-current assets (including investments) of 314 million euros (a net use of 343 million euros in 2015 compared to a net use of 29 million euros in 2014);
- a negative effect of net change in deferred tax assets and liabilities equal to 232 million euros (a net use of 45 million euros in 2015 compared to a net source of 187 million euros in 2014);
- a negative effect of change in trade payables of 158 million euros (a net use of 481 million euros in 2015 compared to a net use of 323 million euros in 2014); and
- a decrease in depreciation and amortization of 149 million euros (4,135 million euros in 2015 compared to 4,284 million euros in 2014).

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Such decreases in cash flows were offset in part by:

- a positive effect of net change in miscellaneous receivables/payables and other assets/liabilities of 1,218 million euros (a net source of 634 million euros in 2015 compared to a net use of 584 million euros in 2014);
- a positive effect of change in trade receivables and net amounts due from customers on construction contracts equal to 535 million euros (a net source of 410 million euros in 2015 compared to a net use of 125 million euros in 2014);
- a positive effect of change in provisions for employee benefits of 448 million euros (a net source of 389 million euros in 2015 compared to a net use of 59 million euros in 2014); and
- a positive effect of impairment losses (reversals) on non-current assets (including investments) of 240 million euros (a net source of 253 million euros in 2015 compared to a net source of 13 million euros in 2014).

***Cash flows used in investing activities.*** Cash flows used in investing activities were 3,964 million euros in 2016, 5,385 million euros in 2015 and 5,710 million euros in 2014.

**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).

**2015 compared to 2014**

The decrease in cash used in investing activities in 2015 compared to 2014 of 325 million euros was due to:

- an increase of 639 million euros in proceeds from sale/repayments of intangible, tangible and other non-current assets (a net source of 717 million euros in 2015 compared to a net source of 78 million euros in 2014); and
- a negative effect of change in financial receivables and other financial assets of 483 million euros (a net use of 635 million euros in 2015 compared to a net use of 1,118 million euros in 2014).

Such effects were offset in part by:

- an increase in capital expenditures (intangible and tangible assets on a cash basis) of 767 million euros (5,426 million euros in 2015 compared to 4,659 million euros in 2014).

**Cash flows used in financing activities.** Cash flows used in financing activities were 1,263 million euros in 2016, 902 million euros in 2015 and 273 million euros in 2014.

*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.

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*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.

*Cash flows used in financing activities* in 2014 of 273 million euros reflected mainly the following:

- a net use of financial liabilities and other of 195 million euros, as a result of the issuance of new debt (a source of 4,377 million euros), the change in current financial liabilities and other (a net source of 1,305 million euros) and the repayments of non-current financial liabilities (a use of 5,877 million euros); and
- the payment of dividends of 252 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, at December 31, 2016 Net Financial Debt was 25,955 million euros compared to 28,475 million euros at December 31, 2015 and compared to 28,021 million euros at December 31, 2014.

In our 2017-2019 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, 2016, 2015 and 2014 is set forth in the following table.



	<b>As of December 31,</b>		
	<b>2016</b>	<b>2015</b>	<b>2014</b>
	<b>(millions of euros)</b>		
Non-current financial liabilities	30,469	30,518	32,325
Current financial liabilities	4,056	6,224	4,686
Financial liabilities directly associated with Discontinued operations/Non-current assets held for sale		348	43
<b>Gross financial debt (A)</b>	<b>34,525</b>	<b>37,090</b>	<b>37,054</b>
<b>Non-current financial assets (B)</b>	<b>(2,698)</b>	<b>(2,989)</b>	<b>(2,445)</b>
<b>Current financial asset:</b>			
Securities other than investments	(1,519)	(1,488)	(1,300)
Financial receivables and other current financial assets	(389)	(352)	(311)
Cash and cash equivalents	(3,964)	(3,559)	(4,812)
<b>Total current financial assets (C)</b>	<b>(5,872)</b>	<b>(5,399)</b>	<b>(6,423)</b>
<b>Financial assets relating to Discontinued operations/Non-current assets held for sale (D)</b>		<b>(227)</b>	<b>(165)</b>
<b>Financial assets (E=B+C+D)</b>	<b>(8,570)</b>	<b>(8,615)</b>	<b>(9,033)</b>
<b>Net financial debt (A+E)</b>	<b>25,955</b>	<b>28,475</b>	<b>28,021</b>

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The non-current portion of gross financial debt was 30,469 million euros at December 31, 2016 (30,518 million euros at December 31, 2015 and 32,325 million euros at December 31, 2014) and corresponds to 88.25% 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 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		2015		
	(a)	% of total	(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			8	0.2	(8)
<i>Adjustments</i>					
<b>Total consolidated capital expenditures</b>	<b>4,876</b>	<b>100.0</b>	<b>5,197</b>	<b>100.0</b>	<b>(321)</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.

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Capital expenditures in 2016 totaled 4,876 million euros, down 321 million euros on 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*, the investment for the user rights related to the L band frequencies (231 million euros) and for the extension of the GSM license (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 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 autovehicles, and of the finance lease contract 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 around 35 million euros) realized by the Brazil Business Unit in 2016 from the sale of telecommunications towers.

\*\*\*

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 (1,106 million euros as of December 31, 2015).

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The following table summarizes the main transactions which had an impact on the change in net financial debt during 2015:

	(millions of euros)
<b>Net financial debt as of December 31, 2014</b>	<b>28,021</b>
Capital expenditures	5,197
Change in finance lease contracts	1,523
Dividends paid	204
Financial investments	51
Share capital increases/decreases	(186)
Disposal of investments and other divestitures	(1,571)
Cash flows from operating activities, net of other uses (sources)	(4,764)
<b>Net change in 2015</b>	<b>454</b>
<b>Net financial debt as of December 31, 2015</b>	<b>28,475</b>

In particular:

- **Capital expenditures on an accrual basis** were 5,197 million euros in 2015, an increase of 213 million euros compared to 2014. The breakdown is as follows:

	Year ended December 31,				Changes (a-b)
	2015		2014		
	(a)	% of total	(b)	% of total	
	(millions of euros, except percentages)				
Domestic	3,900	75.0	2,783	55.8	1,117
Brazil	1,289	24.8	2,195	44.0	(906)
Media, and other activities	8	0.2	6	0.2	2
<i>Adjustments</i>					
<b>Total consolidated capital expenditures</b>	<b>5,197</b>	<b>100.0</b>	<b>4,984</b>	<b>100.0</b>	<b>213</b>
<i>% on revenues</i>	<i>26.4</i>		<i>23.1</i>		

In particular:

- the **Domestic Business Unit** reported an increase of 1,117 million euros in capital expenditures in 2015. This increase is primarily due to:
  - the increase in innovative investments dedicated to the development of next-generation networks and services (+788 million euros), which currently represent 44% of total investments (compared to 33% in 2014);
  - the award of the user rights for the frequencies of the L band (231 million euros); and
  - the disbursement related to the extension of the GSM license for three years, amounting to 117 million euros.
- the **Brazil Business Unit** reported a decline of 906 million euros in capital expenditures in 2015 (including a negative exchange rate effect of 341 million euros). These capital expenditures were mainly aimed at the development of the industrial infrastructure and sales-support platforms. The 2014 capital expenditures included the acquisition of the user rights for the 700MHz frequency totaling 936 million euros.
- **Change in finance lease contracts** amounted to 1,523 million euros in 2015. 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 that took place during 2015 as part of the project of transformation of real estate assets by TIM S.p.A. (1,178 million euros) and of the finance lease contract by the TIM Brasil group with respect to the telecommunications towers (1,245 million reais, or, approximately 337 million euros).

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- **Financial investments** amounted to 51 million euros in 2015 and mainly referred to disbursements of:
  - 23 million euros for the acquisition of 50% of the share capital of Alfiere S.p.A., a real estate company that owns several buildings in the EUR district of Rome;
  - 6 million euros for the purchase, in July 2015, of 100% of the equity capital of Alfabook S.r.l.; this transaction represented a financial investment (of which 5 million euros represented the price and 1 million euros was related to the net financial debt acquired); and
  - approximately 9 million euros, in October 2015, for the withdrawal rights exercised by the previous shareholders of Telecom Italia Media S.p.A., which was merged into TIM on September 30, 2015.
- **Disposal of investments and other divestitures** amounted to 1,571 million euros in 2015 and principally related to:
  - 854 million euros, net of the related transaction costs, resulting from the placement of 39.97% of the share capital of Infrastrutture Wireless Italiane S.p.A. (INWIT), which took place in June 2015, followed, in July 2015, by the exercise of the greenshoe option;
  - 2,498 million reais (approximately 676 million euros) of proceeds generated by the Brazil Business Unit from the sale of the first tranches of telecommunications towers to American Tower do Brasil;
  - 19 million euros from the sale of the company Teleleasing S.p.A., which took place in December 2015;
  - 9 million euros from the sale of the company SIA S.p.A., classified under Other investments, which took place in July 2015;
  - for the remaining amount, to the disposal of assets in the normal operating cycle.

\* \* \*

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 (1,016 million euros as of December 31, 2015).

***Gross Financial Debt***

On a consolidated basis, at December 31, 2016, our gross financial debt amounted to 34,525 million euros (37,090 million euros at December 31, 2015) and included non-current financial liabilities (long-term debt) of 30,469 million euros (30,518 million euros at December 31, 2015) and current financial liabilities (short-term debt) of 4,056 million euros (6,224 million euros at December 31, 2015).

At December 31, 2015, gross financial debt included also 348 million euros of financial liabilities directly associated with Discontinued operations/Non-current assets held for sale.

As of December 31, 2016, approximately 66.1% 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, 2016		As of December 31, 2015	
	(millions of foreign currency)	(millions of euros)	(millions of foreign currency)	(millions of euros)
USD	7,504	7,119	8,463	7,774
GBP	2,017	2,356	2,041	2,781
BRL	7,128	2,075	6,442	1,515
JPY	20,032	162	20,036	153
EURO		22,813		24,519
		<b>34,525</b>		<b>36,742</b>
Discontinued operations/Non-current assets held for sale				348
<b>Total gross financial debt</b>		<b>34,525</b>		<b>37,090</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 Telecom Italia 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 2016.

		<b>As of December 31, 2016</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		28,552.79
Notes and bonds repaid		(15,300.72)
<b>Net utilization of the program</b>	(B)	<b>13,252.07</b>
<b>Remaining available amount of the program</b>	(A-B)	<b>6,747.93</b>

*Notes and bonds*

At December 31, 2016 we had notes and bonds outstanding of 22,964 million euros (23,564 million euros at December 31, 2015). The nominal repayment amount at December 31, 2016 was 22,417 million euros, a decrease of 530 million euros compared to December 31, 2015 (22,947 million euros).

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Changes in bonds during 2016 were as follows:

	<b>Currency</b>	<b>Amount (millions)</b>	<b>Issue date</b>
<b>NEW ISSUES</b>			
Telecom Italia S.p.A. 750 million euros 3.6250% maturing 01/19/2024	Euro	750	01/20/2016
Telecom Italia S.p.A. 1,000 million euros 3.6250% maturing 05/25/2026	Euro	1,000	05/25/2016
Telecom Italia S.p.A. 1,000 million euros 3.000% maturing 09/30/2025	Euro	1,000	09/30/2016

	<b>Currency</b>	<b>Amount (millions)</b>	<b>Repayment date</b>
<b>REPAYMENTS</b>			
Telecom Italia S.p.A. 5.125% 663 million euros (1)	Euro	663	01/25/2016
Telecom Italia S.p.A. 8.250% 708 million euros (2)	Euro	708	03/21/2016
Telecom Italia S.p.A. EURIBOR 3M + 0.79% 400 million euros	Euro	400	06/07/2016

(1) Net of buybacks by TIM S.p.A. of 337 million euros during 2014 and 2015.

(2) Net of buybacks by TIM S.p.A. of 142 million euros during 2014.

**BUYBACKS**

<b>Bond Title</b>	<b>Outstanding nominal amount prior to the Tender Offer (GBP)</b>	<b>Repurchased nominal amount (GBP)</b>	<b>Buyback price</b>	<b>Buyback date</b>
Telecom Italia S.p.A. 400 million GBP, maturing May 2023, coupon 5.875%	400,000,000	25,000,000	111.000%	06/29/2016

On November 15, 2016, a mandatory conversion at maturity took place in connection with the 1,300,000,000 6.125% Guaranteed Subordinated Mandatory Convertible Bonds due 2016 issued by Telecom Italia Finance S.A. and guaranteed by TIM S.p.A.. These bonds were converted on the basis of the final conversion ratio (Relevant conversion ratio) of 131,018.75372, corresponding to 1,702,850,712 new ordinary shares of TIM S.p.A., representing approximately 11.2% of the ordinary share capital of the Company or 8% on a fully diluted basis.

On September 22, 2016, a total of 360,100 TIM ordinary shares were issued following a voluntary conversion notice for the nominal amount of 300,000 euros.

With respect to the TIM S.p.A. 2002-2022 bonds, reserved for subscription by employees of the Group, at December 31, 2016, the amount was 201 million euros (nominal amount) and increased by 1 million euros compared to December 31, 2015 (200 million euros).

For further details about the outstanding notes and bonds as of December 31, 2016 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, 2016.

	<b>As of December 31, 2016</b>	<b>As of December 31, 2015</b>
	<b>Committed</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 amounts of 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.

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TIM also has access to:

- a bilateral term loan from Banca Regionale Europea expiring July 2019 for 200 million euros, drawn down for the full amount;
- a bilateral term loan from Cassa Depositi e Prestiti, expiring in April 2019 for 100 million euros, drawn down for the full amount;
- two bilateral term loans from Mediobanca; one for 200 million euros expiring in November 2019 and another for 150 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 dell' Emilia Romagna expiring July 2017 for 200 million euros, drawn down for the full amount.

***Maturities of financial liabilities and average cost of debt***

The average maturity of non-current financial liabilities (including the current portion of medium/long-term financial liabilities due within 12 months) is 8.02 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, is about 5.1%.

For further details about the maturities of financial liabilities in terms of the expected nominal repayment amounts, as contractually agreed, please see below Contractual Obligations and Commitments.

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

The TIM Group's available liquidity margin was 12,483 million euros at December 31, 2016 corresponding to the sum of Cash and cash equivalents and Current securities other than investments, totaling 5,483 million euros (5,047 million euros at December 31, 2015), and the committed credit lines, mentioned above, of which a total of 7,000 million euros had not been drawn down. This margin is sufficient to cover the Group's Financial Liabilities due at least for the next 24 months.

In particular:

- Cash and cash equivalents amounted to 3,964 million euros (3,559 million euros at December 31, 2015). The different technical forms of investing available cash at December 31, 2016 can be analyzed as follows:
    - Maturities: all deposits 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.
  - Securities, other than investments, amounted to 1,519 million euros (1,488 million euros at December 31, 2015). These forms of investment represent alternatives to the investment of liquid funds with the aim of improving returns. They consist of 258 million euros of Italian treasury bonds purchased by TIM S.p.A. and 548 million euros of Italian treasury bonds purchased by Telecom Italia Finance S.A. as well as 573 million euros of bonds purchased by Telecom Italia Finance S.A. with varying maturities but all having active trading markets and readily convertible into cash. The purchases of the above government bonds, which, pursuant to Consob Communication DEM/11070007 of August 5, 2011, represent investments in Sovereign debt securities, have been made in accordance with the Guidelines for the Management and control of financial risk adopted by the TIM Group since August 2012. In addition, the Brazil Business Unit made an investment of 140 million euros in a monetary fund that invests almost entirely in U.S. dollar instruments.
- 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 15 million euros.

The guarantees provided by third parties to Group companies, amounting to 5,695 million euros, consisted of guarantees for loans received (1,771 million euros) and of performance under outstanding contracts (3,924 million euros).

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).

A surety was also issued in October 2016 on behalf of Telecom Italia Sparkle, in favor of the Italian Revenue Agency Lazio Regional Department, for 198 million euros, upon the outcome of the summary suspension order for the provisional execution of the ruling issued by the Provincial Tax Commission of Rome, which had rejected the Company's appeal against the fines issued by the Italian Revenue Agency Lazio Regional Department for a total amount of 280 million euros (see paragraph a) Significant disputes and pending legal actions). The guarantee has been issued in accordance with Article 68 of Italian Legislative Decree 546/1992 and gives the Italian Revenue Agency Lazio Regional Department the right, with respect to the appeal lodged by the Company, to collect an amount equal to 2/3 of the original claim

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, 2016, the **nominal repayment amounts of payables** and the relating expiration dates were as follows:

	Amounts due as of December 31,						Total
	2017	2018	2019	2020	2021	After 2021	
	(millions of euros)						
Bonds	2,049	1,817	2,546	1,267	563	14,175	22,417



Amounts due to banks, other financial payables and liabilities	567	1,355	1,918	750	702	225	5,517
Finance lease liabilities	141	124	110	109	108	1,984	2,576
<b>Total</b>	<b>2,757</b>	<b>3,296</b>	<b>4,574</b>	<b>2,126</b>	<b>1,373</b>	<b>16,384</b>	<b>30,510</b>
Current financial liabilities	596						596
<b>Total</b>	<b>3,353</b>	<b>3,296</b>	<b>4,574</b>	<b>2,126</b>	<b>1,373</b>	<b>16,384</b>	<b>31,106</b>

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.

**Table of Contents****Item 5. Operating And Financial Review And Prospects****Liquidity And Capital Resources****5.3.3 CAPITAL EXPENDITURES**

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

	Year ended December 31,		
	2016	2015	2014
	(millions of euros)		
<b>Capital expenditures on tangible assets:</b>			
Domestic (*)	2,596	2,446	1,782
Brazil	639	784	774
Media and Other Operations (*)		8	6
Adjustments and eliminations			
<b>Total capital expenditures on tangible assets (1)</b>	<b>3,235</b>	<b>3,238</b>	<b>2,562</b>
<b>Capital expenditures on intangible assets (2)</b>	<b>1,641</b>	<b>1,959</b>	<b>2,422</b>
<b>Total capital expenditures (3)</b>	<b>4,876</b>	<b>5,197</b>	<b>4,984</b>

(\*) 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 the change, the capital expenditures on tangible assets of the Domestic Business Unit would have totaled 2,590 million euros.

(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 2017-2019 period at the TIM Group level in Italy and in Brazil are:

- **11 billion euros of investments in Italy**, approximately 5 billion euros of which will be dedicated to speeding up the development of the ultrabroadband networks;

- **less than 12 billion reais of investments in Brazil**, mainly for the deployment of the broadband mobile network.  
\* \* \*

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

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TIM operates the largest fixed voice and data infrastructure in Italy, covering the whole of the country, and provides one of the country's most extensive and advanced mobile network platforms. Therefore, in terms of size, ubiquity and infrastructural and technological assets, it is a system company, integrated with the territory and with the social, economic and production fabric, with a pervasive role for the whole of the country's economy and the competitiveness of its companies, the efficiency of local governmental bodies and, more generally, the welfare of its citizens.

The Group produces approximately 0.7% of the added value of Italian Gross Domestic Product<sup>6</sup>. In Italy, the Group employs approximately 50 thousand people directly and approximately 100 thousand people indirectly, i.e., employees operating on projects connected with the business of TIM, which corresponds to approximately 1% of Italy's entire private sector.

In recent years, we have witnessed a digital transformation process involving every player in the economy (changes in technology and in working methods) and society, with major and widespread global impacts. This process is the basis for the development of new business models, which are themselves part of new ecosystems, based on enabling platforms like information systems, customer experience, analytics, intelligence, etc. which require fast technological evolution, particularly to ensure, quickly and safely, that significant amounts of information can be collected, processed and exchanged instantly.

TIM is playing a broadly strategic role in this respect and is at the forefront of developing new models, both as a protagonist of the ICT sector and as an enabler of other sectors of the economy, translating into products and services two of the key drivers of digital transformation, the Internet of Things and Cloud.

Aware of its strategic role, TIM works constantly to manage and innovate the infrastructure and technology with which it serves the country. During 2016, the Group invested approximately 2 billion euros in next generation networks alone. The Group's three-year business plan for 2017-2019 confirms its commitment to investing in advanced infrastructure and technologies and is focused on next generation ultrabroadband (UBB) networks in particular, a major undertaking that network technicians and engineers are working to deliver every day.

To complete its commitment to creating next generation networks, the Group has set up a new company (Flash Fiber S.r.l.) to promote the creation of ultrabroadband infrastructure using FTTH (Fiber To The Home) technology in Italy's main cities. Flash Fiber aims to create a fiber optic access network that is expected to connect around 3 million households in Italy's biggest 29 cities with FTTH technology by 2020, providing connection speeds of 1 Gbps and involving a total investment of 1.2 billion euros.

In addition, in March 2017, the Board of Directors approved a new project to create a company dedicated exclusively to the selective development of new fiber infrastructure in some specific Italian rural areas (or so called "white areas"). Creation of this new company, in partnership with a financial partner, is intended to enable TIM to achieve its targets to cover the country with UBB almost 2 years ahead of the schedule set out in the three year plan. The acceleration expected to result from such a company could lead to 95% coverage of the Italian population with UBB connections by mid-2018, with coverage increasing to 99% at the end of the current plan in 2019, aided also by the contribution of wireless technologies. Over 6,000 municipalities would be affected by the project, with over 7 million homes to be

connected. The company is expected to offer all operators wholesale connection services, guaranteeing equal treatment.

The Company has confirmed its commitment to offering the most advanced and reliable technology for mobile communications as well. In 2016, mobile networks have achieved almost total coverage of the country with the new 4G/LTE standard and, in order to respond quickly to the growing demand for high speed data, the Group is committed to testing 5G technology, which allows it to respond to the growing demand for video content, social media and digital services on the move.

<sup>6</sup> Internal estimates of 2015 data.

<sup>7</sup> According to the Italian Strategy for the Next Generation Access Networks, cluster C is made up of areas of market failure, i.e., rural areas for which operators invest in networks with more than 100 Mbps only because of state aid support, whereas cluster D involves market failure areas for which broadband connectivity above 30 Mbps can only be provided through public intervention.

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The investment plan TIM is implementing coincides with a phase in which the Italian government is engaged in implementing the national strategic ultrabroadband plan, which aims to achieve the challenging objectives of the European Digital Agenda in terms of a widespread supply of infrastructure and an increase in the demand for digital services. In this regard, during 2016, the European Commission made the digitalization targets in Member States even more challenging by establishing three strategic connectivity objectives for 2025, with the aim of satisfying the growing need for connectivity of European citizens and strengthen European competitiveness. These three strategic objectives include ensuring (i) high connectivity for main socio-economic drivers, such as schools, universities, research centers and other providers of public services, (ii) download speeds of at least 100Mbps for all European households, and (iii) uninterrupted 5G coverage for all urban areas and major roads and railways.

**Research and development**

The Telecommunications sector has undergone a rapid major transformation in recent years, characterized by the decline in traditional voice services and the growth of fixed and mobile broadband and the new services enabled by it, contributing towards the rapid digitization of the life for consumers and business processes.

In recent years, the Group has started its own evolution path, confirming its role as a systems company in the supply of services and platforms as well as a supplier of connectivity with innovative digital services. Innovation, both technological and business-based, is confirmed as the central element to respond to the change in the technological, market and competitive context. The Group has taken action in several ways:

- reinforcing the lines of internal innovation and focusing on developing fixed and mobile networks towards future 5G standards and ultrabroadband and issues concerning service platforms and new operations systems, including through collaboration with and development of the Joint Open Labs ( JOLs ) with some of Italy's main universities;
- promoting innovation and the creativity of employees launching projects to crowdsource ideas through the Idea Sharing<sup>8</sup> initiative;
- affirming the Open Innovation principles in relation to the world of start-ups and new innovative entrepreneurship. Open Innovation enables integration of internal innovations with external sources of innovative ideas. The flow of ideas from the ecosystem are flanked by:
  - co-innovation, co-creation and generation of ideas and values by means of new partnership models with the most important global players;
  - catalyzing of the innovation capacities of start-ups through the TIM #Wcap acceleration program and investments in equity through TIM Venture;

simplification of the process of activating supplies made by innovative start-ups through the so-called *Albo Veloce* (Fast Supplier List), which enables the qualification on the list of suppliers of a start-up with a simplified, faster procedure, and *Basket Innovazione* (Innovation Basket), a budget dedicated to encouraging the purchase of solutions from the start-ups included on the *Albo Veloce* partially covering the costs.

Different innovative solutions and prototypes were transformed into business propositions and commercial opportunities for TIM, including *CitySensing* (a platform for managing large events in urban areas based on the collection of Big Data from social media and mobile networks), *Cloud Robotics* and *Virgil* (solutions involving drones and remote presence robots connected through the TIM 4G network), Internet of Things systems, including *Smart Agriculture* (developed with Olivetti).

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

- <sup>8</sup> *Idea Sharing* is a competition designed to produce ideas, the purpose being to discover the talent and creativity of the Group's employees to improve the customer experience of TIM services. The competition ended in December 2016.

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In the last three years, the Group has received over 5 million euros from the European Union and has collaborated with some of the most important European and North American universities and centers of excellence. In the last four years, 133 PhDs have been financed, sponsoring first level masters degrees at the Scuola Superiore Sant Anna di Pisa (Management, Innovation and Engineering of Services and Digital Life & Smart Living) and Tor Vergata university (Big Data in business), and the TIM Chair in Market Innovation at Milan's Bocconi University.

Moreover, activities to accelerate and invest in start-ups have continued. TIM #Wcap is the business accelerator of the TIM Group that each year selects, finances and accelerates digital start-ups. Since 2013, the TIM #Wcap start-ups have launched over 50 go-to-market activities within TIM. From 2009 to date, more than 9,000 business ideas have been examined and approximately 300 projects have been selected and supported, to which 6.6 million euros have been awarded. The survival rate of the TIM #Wcap start-ups is over 90%.

In 2014, TIM launched TIM Ventures, a venture capital company created with the aim of investing in innovative start-ups in all the sectors of strategic interest for TIM. In just over two years of business, TIM Ventures has invested in 14 start-ups (12 of which came from TIM #Wcap) and was mentioned by CB Insights (venture capital data base) as one of the most active global Corporate Venture Capital investors for 2015.

In June 2016, Fondazione Nesta and Startup Europe Partnership ranked TIM 7th among the 25 European companies that dialogue best with start-ups. TIM was the only Italian company on the list.

In Italy, TIM employs approximately 1,200 resources in engineering, technological innovation and service activities. Investments in innovation and transformation amount to 1.9 billion euros, equaling approximately 52% of the total investments on the domestic market.

**Relevant Stakeholders**

The relevant stakeholders for research and development are:

- the areas of the company involved (e.g. Marketing and Purchasing);
- the suppliers, for the joint development of solutions in accordance with the technical requirements of the TIM Group;
- the traditional (e.g., car makers) and digital (e.g., eCommerce players) partners, for the joint go to market of digital services;
- research centers and universities, for cooperation and joint projects. In 2016, 11 research contracts were formalized and went into effect, for a total value of 388,000 euros, exclusively with Turin Polytechnic, on topics such as Internet of Things ( **IoT** ), smart mobility, privacy protection, new communication services and paradigms; the activities were carried out in the JOL activated at Turin Polytechnic;



- over 30 standardization bodies and discussion groups at national and international levels and the international research and development bodies (including NGMN, Open Networking Forum, 3GPP<sup>9</sup>, ETSI<sup>10</sup>, IEC, CENELEC, TM Forum, BBF, ITU) in which TIM continues to actively participate;
- the Ministries (Ministry for Economic Development and Ministry of Education, Universities and Research), the European Union and public authorities (e.g., the National Research Council ( **CNR** ) and local authorities) for projects funded through participation in competitive tenders, and partnership initiatives; and
- non-governmental organizations, associations, alliances and industry forums (e.g. GSM Association, m-health), which bring together all the entities involved in the value chain of the specific market.

This model of managing innovation contributed to TIM receiving the prestigious National Prize for Innovation in 2016, established by the Prime Minister's Office and awarded by Confindustria and which rewards the capacity to innovate the quality of portfolio solutions and services, processes of managing innovation, the company culture geared towards innovation and the capacity to efficiently transform innovation projects into services to support citizens, businesses and organizations.

<sup>9</sup> The 3rd Generation Partnership Project.

<sup>10</sup> European Telecommunications Standards Institute.

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The themes on which projects are developed, are identified on the basis of the Three-Year Technological Plan (the **Plan** ), the reference document for the Group, which provides guidelines for the evolution of the network, platform and services.

The Plan is published annually and is the result of a wide-ranging process that includes input from most Company departments. It 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.

These guidelines also cover the Patents project, which for TIM represents a continuous activity that is structured into numerous processes, involving various corporate departments and is aimed at promoting, supporting and optimizing patenting activities in the company and, through collaboration with universities, throughout Italy.

Through the collaboration with Italian universities, patenting by the Group contributes to the rate of innovation in Italy, assisting in the patenting of the universities themselves and making the results of their research more tangible. The JOLs are part of this effort. With the company on campus model, they encourage a natural interchange between the academic and industrial worlds. TIM has launched this innovative model of cooperation, promoting the development of different JOLs throughout Italy and localized within the various Italian universities.

**Partnerships with external players**

The Group maintains partnerships with external players, through which the Group oversees the various areas of digital services, including:

- **Cognitive Computing:** an important collaboration agreement has been signed with IBM, which makes the Cognitive Computing platform, called IBM Watson , available to the Group. Cognitive computing is a branch of computing that aims to equip machines with the capacity to reason and interact with humans in a natural manner. Watson is the leading technology in this sector and is currently used in the United States in analyzing imaging diagnostics, as well as in the development of automatic agents, referred to as chatbots that can dialogue with clients on matters that the system has previously learned . The cognitive computing systems learn by reading documents and interacting with humans and the environment. In agreement with the Customer Care and Open Access Departments of the Group, a study is underway to establish how to make cognitive computing available to technical assistance and commercial customer care processes. The operative projects aim to develop two chatbots that guide clients towards the solution of technical problems connected with fiber and provide suitable responses to queries on mobile offers.
- **e-Commerce:** in a partnership with Amazon, an innovative business model has been developed, which optimizes the ability to reach potential clients by relying on geo-marketing to locate potential clients that are in the proximity of the business. In this case, the collaboration is based on a shared remuneration with the partner and thus the partnership is considered an important example of the Group's ability to enter into the value chain of an

Over The Top ( **OTT** ).

- **Participation in The Next Nest project** the Group developed a digital abstraction of a canvas by Daniele Gallian, on display at The Next Nest exhibition, which was open from April to September 2016 as part of the XXI International Exhibition of the Milan Triennale. The digital canvas allowed visitors to interact in a gestural manner, creating new digital versions of the work that are unique and unrepeatable and could be downloaded from the installation site. The way in which visitors interact with the work has a great deal of affinity with the ways in which, by means of the telecommunications services, the Group helps the people to live and share social life, making interaction as natural and simple as possible and helping improve the quality of domestic, social and urban life.
- **Big Data:** learning to collect and effectively analyze large amounts of structured and unstructured data, created by Company systems or available from external sources, has become essential to improving the quality of services and to staying ahead of demand requirements. Effective data management requires radical technological, organizational, procedural, as well as cultural transformations. As such, the Group has undertaken an evolutionary path based on several design sites . Within these sites, various initiatives were launched in 2015 and completed in 2016, with the development of the first internal applications (aimed at

<sup>11</sup> [www.nest.city](http://www.nest.city)

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improving the Customer Experience), the launch of the first services for the Business market on anonymous data, the start-up of the TIM Competence Center that will aim to train the internal competences and scout and search for new Big Data technologies and applications, working in an open logic with the industry's main players. Moreover, in 2016, additional initiatives were also started, aimed at aggregating various industry players and managers to construct data partnership models with the goal of developing innovative applications intended for digital cities (Living Lab project with Turin municipality) and to create innovative services to support private businesses in different fields such as insurance, automobile connectivity, etc..

**Innovative services for the public sector**

In the context of public sector services, in accordance with the Italian Digital Agenda or Agenda Digitale Italiana ( **ADI** ) and European Directives, in 2016, TIM consolidated and streamlined its offer of Smart Services (a range of services for energy efficiency and digital services in urban areas), Urban Security (new services dedicated to security, the environment and optimal energy management) and the Digital School. The aim is to promote the Smart City model to improve quality of life by developing innovative digital services to ferry communities towards a Smart Community model (as described in the Digital Agenda) that enables new forms of cooperation between citizens and public authorities.

			NUVOLA IT	NUVOLA IT
<b>LIGHTING SUITE</b>	<b>SMART BUILDING</b>	<b>NUVOLA IT ENERGREEN</b>	<b>URBAN SECURITY</b>	<b>DIGITAL SCHOOL</b>
Integrated management of the local infrastructural networks and construction of the Smart City environments.	Intelligent management and automation of buildings through specifically designed solutions able to be implemented on a project basis through the components of the Lighting Suite and Nuvola IT Energreen offers.	Remote management of energy consumption, implemented on TIM assets and services, for the purpose of saving energy.	Management of participated security and urban territory control.	Integrated digital management of teaching and school administration. The offer can be configured according to the requirements of the schools and includes a range of integrated, but modular, services, accessible via a single portal-showcase.
Enabled services:		Enabled services:	Enabled services:	Enabled services:
· planning of electricity consumption and maintenance. Energy savings are estimated between 15% (light produced by high-efficiency lamps, e.g. LEDs) and 30% or more in the case of light	Energy savings are estimated to be around 10% if only the Metering & Reporting function is implemented and more than 50% for	· on-site energy audit: on-site analysis for energy efficiency;	· computerized management of the process for issuing fines in connection with traffic and other violations for local public administration;	

<p>produced by old style lamps (e.g., sodium vapour or incandescence). Additionally, there is an option to vary lighting by switching on and/or reducing the intensity of individual lamp posts;</p> <ul style="list-style-type: none"> <li>· video surveillance;</li> <li>· digital communication with citizens and users in general (e.g., tourists); and</li> <li>· Wi-Fi hot spots (broadband access).</li> </ul>	<p>specific efficiency projects.</p>	<ul style="list-style-type: none"> <li>· Metering &amp; Reporting;</li> <li>· Efficiency strategy (advanced reporting and Energy Management consulting services);</li> <li>· Energy Cost Management Services; and</li> <li>· Special Projects: ad hoc efficiency improvement work.</li> </ul>	<ul style="list-style-type: none"> <li>· management of urban issues, with reporting of safety-related issues, antisocial activities and urban decay;</li> <li>· real time monitoring of the urban and natural environment of cities (humidity, temperature, noise pollution, CO<sub>2</sub>, gaseous pollutants, etc.); and</li> <li>· monitoring of available public parking spaces.</li> </ul>	<ul style="list-style-type: none"> <li>· enabling infrastructure (fixed internet, Wi-Fi &amp; security connectivity);</li> <li>· management services for the school (administrative management, cloud electronic register);</li> <li>· digital teaching services (application integrated with school e-book stores); and</li> <li>· devices (for users and for classes).</li> </ul>
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In a world in which technology facilitates contact with people, by disseminating broadband technology and the services it enables, TIM is assisting in overcoming socio-cultural barriers that restrict the opportunity to take part in the information society and enjoy its benefits. The innovative services aimed at promoting the digitization of important areas of activity include those listed below.

With respect to technological innovation, the following are some of the key projects in this area:

- **Support for the launch of numerous LTE Advanced services** at 225 Mbps, 300 Mbps and the first in-the-field test of LTE Advanced services at 500 Mbps, the first in Italy.
- The **creation in Turin of the TIM IoT Open Lab**, a distributed laboratory open to partners and companies for the development and testing of solutions for the Internet of Things world, in particular with LTE NB-IoT (Long Term Evolution NarrowBand Internet of Things) technology, which, due to the low cost of the radio modules, reduced energy consumption and the excellent reception of the radio signal, means that even battery-powered objects can be connected in areas that are difficult to reach, such as gas or drinking water meters.
- **e2Call:** broadband mobile communication technologies represent a platform enabling new functions and services for road safety. In this context, the real-time communication of information on the situation of the roads and localization techniques that allow the position of vehicles to be identified with a high degree of precision are particularly important. This is the basis on which the e2Call project has been created, with the aim of searching for innovative solutions on board vehicles and on the Internet. The scientific responsibility for the study has been assigned to a joint work group guided by the Centro Ricerche Fiat and TIMLab of Trento, co-financed by the Autonomous Province of Trento. The project closed on May 31, 2016, with a workshop to present the results held in Palazzo della Regione Trentino-Alto Adige, in Trento.
- **TIM Personal:** the Group aims to play an increasingly important role in clients' trusted digital lives with respect to sensitive services such as transport, ticketing and payments for which it is important to have a strong user identification mechanism. The TIM Personal service combines the solidity of a digital authentication mechanism based on the mobile terminal and on the SIM (Digital Identity) with the possibility of making secure payments, all via a single app.
- **TIM Market Place and TIM Open:** the so-called Network APIs (Application Programming Interfaces), which allow interoperability between modules and platforms, mean the smart network can be opened up to the applications of external providers. The TIM Market Place is a tool which, using a coordinated approach with such external providers, combines the intelligence and functionality of the network with external services/content, and therefore forms part of the Group's path of transformation into a Platform Company, based on a new shared business model. TIM Market Place has allowed the development of TIM Open commercial services.

- **TIM City forecast:** given their pervasive nature, mobile terminals can be compared to a capillary network of sensors able to provide accurate data in real time on the distribution of the population over the territory and on its movements (Mobility Patterns). Mobility Patterns enable applications linked to the monitoring and management of the territory, related services and mobility infrastructures, all in respect of privacy legislation, by means of a suitable anonymous, aggregated processing of data. For example, the City forecast service predicts the real time distribution of people (by unit of area) over the territory, even where there are specific events, such as the quantification of tourists in a given area. The solutions developed in the TIM City forecast project are used by the Mobility Services Agency, a Roma Capitale company, as an analysis tool for monitoring the presence and mobility of the population and Italian and foreign visitors, in particular in the areas of religious and tourism interest, also in connection with the Jubilee.

#### **Innovative e-health services**

TIM is actively involved, either alone or in partnership with external partners, in devising and developing healthcare services at the national, regional and local level. Designed to improve the Italian health service and the quality and effectiveness of healthcare, the services allow doctors, nurses and patients to carry out many activities remotely. The main electronic healthcare service applications available or being developed include:

- value products and services for general practice, aimed at enabling new primary care models and proactive medical services (e.g. screening campaigns managed by general practitioners);

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- legal archiving of digital diagnostic images on the network, ensuring the authenticity and integrity of documents;
- management of healthcare, administrative and logistical processes and a patient's healthcare information throughout the period of hospitalization;
- management and coordination of operational facilities dedicated to emergencies (118) and continuity of assistance; and
- healthcare monitoring (Nuvola IT Home Doctor).

All the solutions are designed to comply with the data privacy and transaction security requirements of healthcare processes.

Specifically:

- **Nuvola IT Home Doctor:** allows the monitoring of physiological parameters (body weight, blood pressure, heart rate, blood oxygen levels, glycaemia, lung capacity, electrocardiogram, physical activities, etc.) for patients suffering from chronic illnesses, or in post-hospital care, directly from their own homes or in properly equipped facilities (medical centers, medical practices, etc.). The system consists of a technological platform and software configured on the patient's mobile phone (or alternatively a PC or tablet) and on the healthcare personnel's PC. Based on the plans established by the doctor, patients receive reminders on their mobile phones regarding needed measurements, which can then be taken through the use of portable electro-medical devices equipped with a Bluetooth interface and which can be transmitted by mobile phone through the online platform. The benefits of the service are that it improves the patient's quality of life while optimizing costs for the healthcare organization.
- **Fisio@Home:** an experimental motor telerehabilitation service that allows medical personnel to remotely monitor the conditions of patients with orthopedic problems. The prototype, tested at the health authority of Viareggio, has been developed for the rehabilitation of knees, although the application can be used for other conditions. The system allows doctors to evaluate compliance with the established program and the correctness of the exercises performed. Movement data is collected by sensors worn by the patient, which measure acceleration, angular speed and magnetic field along the reference axes. The data is sent by Bluetooth to a tablet, where an application processes it in real time in order to extract information that can be used to define the movements and store them. The sensors, created by Scuola Superiore Sant'Anna, have already been engineered and are ready for large-scale deployment.
- **Cassiel 2.0:** the service provides remote assistance to elderly people, monitoring them and receiving alarm signals in cases of emergency. The sensors located in dwellings process the data collected, to perform behavioral analyses with a view to improving quality of life. The complete solution includes a reminder service, called RicordaMI, to monitor therapies and ensure their completion. Through the involvement of 3 Federfarma Pisa



pharmacies in supplying the requirements and dosages set for each patient, and Farmadati for the supply of the medicines database, the system was successfully tested in the province of Pisa, collecting valuable data to improve the solution. Through the adoption of a simple tablet application, the system can also be used by people with mild cognitive impairments. The service also allows for monitoring of the cardiovascular system, which tends to be less healthy in elderly patients, by using non-invasive methods (pressure, weight and physical activity) and based on statistical models accepted by the scientific community (Framingham risk score). Formal and informal caregivers can check the state of health of their loved ones on a specific site.

- **Tele-monitoring of Parkinson s disease:** as part of the development of a tele-monitoring system for patients affected by Parkinson s disease, TIM has filed two patent applications relating to the upper and lower limbs. Based on the data collected during trials, machine learning techniques were applied to developing a UPDRS (Unified Parkinson s Disease Rating Scale) automatic assessment algorithm to emulate the assessment provided by the neurologist according to this standardized scale.
- **WebSensor:** a prototype for remote monitoring of the progress in Parkinson s disease developed with the support of neurologists. A set of sensors worn on the body and hands monitors the exercises performed by the patient and sends the data to a platform that processes them and supplies parameters that can be used to assess the status of the disease. The hand sensors, which are often uncomfortable to wear, were replaced

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by an appropriate stereoscopic (LeapMotion) camera that frames the hand and automatically extracts the exact position of the fingers in space. In collaboration with the non-profit organization Neurocare from Cascina (PI) data was obtained from over 15 Parkinson's sufferers and the same number of healthy elderly people (controls); this data made it possible to validate the use of the Leap Motion sensor to identify and measure the degree of advancement of the disease.

- **PAPI:** a prototype tested on 30 people aged over 65, suffering from slight cognitive function deficits, for their remote rehabilitation. The system provides a kit of interactive games for Android tablets, designed in collaboration with neuropsychologists to stimulate the patient's various cognitive functions. The games, tested in collaboration with NeuroCare from Cascina (Pisa) and TrentoRise's living lab in Trento, communicate with a remote server to send data relating to the patient's performance and to download their settings. The experiments have allowed the games to be improved, making them more interesting for users and integrating them with other games created by third parties involving the rest of the family, in a kind of game show that encourages their use (GameBus project).

**Infomobility and Smart Cities**

Infomobility systems, using information obtained from mobile handsets, allow for the optimization of traffic flows, reducing travel times and the emission of greenhouse gases.

- **URBeLOG:** a project funded by MIUR<sup>12</sup> as part of the Smart Cities project in which TIM participates alongside six other organizations: TNT, Iveco, Temporary Association of Companies (ATI) (comprised of FIT, Italdata and TEMA), Polytechnic of Turin, Bocconi University and Scuola Superiore Sant'Anna. The reference topic is urban logistics, namely the distribution of goods in what is defined as the last mile. The aim of the project is to propose new processes and methods and an open and integrated ICT environment that allows all stakeholders to interact efficiently, minimizing the environmental impact of activities. TIM is helping to develop an open and cooperative multi-sided platform and specifically an innovative layer of middleware capable of managing all the information available arriving from various sources (devices, vehicles, fleet management systems, traffic management legacy systems etc.). The URBeLOG solutions will be tested as part of two field trials planned in the municipalities of Turin and Milan.
- **National Pilot eCall I\_HeERO project:** the public service for vehicle emergency calls based on calls to a single emergency number E112 (eCall) will be operational in all EU Member States for all new models of cars registered and produced after March 2018; these vehicles must be natively equipped with a mobile network modem capable of automatically calling the emergency number in the event of an accident. All mobile network operators must update their networks to correctly process and route incoming eCalls to the first level PSAP (Public Safety Answering Point) identified at national level. TIM has already supported the first pilot phase with pre-operative tests in the Varese area and the deployment of the first national eCall PSAP in Varese. The second phase of the pilot project, which will take place over the 2016-2017 period, will expand the service to the Trento area and will be the last step before full deployment. The pilot phases are co-funded by the European project I\_HeERO.

**Open Air Lab (OAL):** TIM's smart city lab for more sustainable cities. The Open Air Lab, located at TiLab in Turin, represents aspects of a Smart City model, and the transformations that ICT and the always-connected dimension will define for the urban scenarios of the upcoming years. Analysts forecast greater connectivity among objects in the coming years. Gartner Inc. envisages that objects directly connected to each other and through the mobile networks (4G, 5G and future developments) will increase at a rate of 5.5 million per day, reaching over 20 billion by 2020. At the OAL, there are representations and illustrations of models that include Smart Mobility, smart rest areas, efficient management of waste and public green areas, servicing of robotics, urban security, management of the public lighting network, Smart Metering, gas, electricity and water distribution networks, Digital Island services, loaning of books, food and beverage distribution, smart parking and public telephone Totem, which provides advanced digital and multimedia services in addition to regular public telephony services. The garden area includes objects and spaces equipped with sensors for data collection and transmission, including (i) the smart bench, which provides connectivity, produces light effects and plays online music, detects air parameters such as atmospheric pressure, pollution, temperature, humidity and luminosity; (ii) the greenhouse with meteorological and environmental sensors, such as water potential and leaf wetness, allowing for remote activation; (iii) the small dome, an urban waste container

<sup>12</sup> Ministero dell'Istruzione, dell'Università e della Ricerca, the Italian Ministry of Education, Universities and Research.

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with integrated sensors to track and make separated waste collection more efficient; (iv) the bus shelter with traffic and environmental sensors; (v) lampposts that can be switched on and off and which can be adjusted remotely; (vi) noise and environmental pollution sensors; and (vii) gas and water meters to provide customers with a service that delivers more information and efficiency. At the core of operations in the OAL is the Control Room, where an IoT-TiLab platform collects and stores the data detected by the sensors. The OAL allows Internet of Things scenarios to be assessed, technological scenarios that will characterize the innovation of upcoming decades in which, through the evolving use of the Internet, objects will become recognizable and smart by communicating collected data.

**Research and innovation in e-security**

TIM is involved in research and innovation regarding cyber security and more generally the security of information and networks. Activities carried out in 2016 included the following:

- the design of a proprietary platform based on open source technologies for the collection and management of security Big Data;
- the study and development of new examination models to be used with visual analysis tools for security Big Data;
- the study and testing of new approaches for safety analysis and risk management on LTE networks and telco cloud platforms;
- implementation of various scouting and testing campaigns on innovative security solutions;
- the development of new enhanced SIM solutions (iUICC Universal Integrated Circuit Card<sup>®</sup>) in the context of the GSMA to enable new authentication models for the Consumer and IoT world of the next generation;
- the pursuit of activities for the security analysis of mobile apps and mobile devices;
- the collaboration, within the scope of 3GPP SA3 SECAM<sup>14</sup>, for the definition of the security requirements and test methods on devices for 3GPP standard networks;
- completion of activities in the international projects IST NEMESYS (Information Society Technologies, enhanced Network security for seamless service provisioning in the smart Mobile EcoSYSstem) project and CIP (Competitiveness and Innovation framework Programme) Advanced Cyber Defence Center project;

- the participation, with another 15 partners, in the works of the 5G-ENSURE consortium (5G Enablers for Network and System Security and Resilience), in order to obtain a loan under the scope of the European H2020 program and study, define and test the security measures and resilience of the future 5G networks, developing a 5G Security Architecture;
- the development, in the context of ETSI, of the works of the Cybersecurity Technical Committee ( **TC CYBER** ) focused on Cyber Security;
- the continuation of other monitoring and guidance activities in the area of GSMA Fraud and Security Group;
- development of cooperation launched in 2013 with EIT (European institute of Innovation and Technology), Digital and the Action Line Guide to Privacy, Security & Trust.

#### **Importance of the Group in Brazil**

TIM Brasil invested 4.5 billion reais in 2016 and plans to invest just under 12 billion reais in 2017-2019, in connection with a plan to provide 4G coverage to over 95% of the urban population by 2019. TIM Brasil manages more than 63 million mobile lines.

By December 2016, the urban population covered with 4G technology reached 74%, an increase of 15% over the previous year. 3G technology reached 89% of the urban population by the end of 2016.

<sup>13</sup> It is the smart card used in mobile terminals in GSM and UMTS networks.

<sup>14</sup> SA3 is the Working Group responsible for security and privacy in 3GPP systems, and is a subgroup of the Technical Specification Group on Service and System Aspects (TGS-SA) of 3GPP, where SECAM is the SECurity Assurance Methodology for 3GPP nodes developed by SA3.

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The number of towns and cities covered by LTE more than tripled in 2016, reaching a total of 1,255 compared with 411 at the end of 2015, while the number of towns and cities covered by 3G technology is 2,833, an increase of 1,000 compared to 2015. By 2019, approximately 3,600 towns and cities are expected to be covered by 4G technology and 3,200 by 3G. The investment in infrastructure allowed the fiber optic network (both urban and long distance) to be extended to 76,000 km by the end of 2016.

**Research and development in Brazil**

Over the past three years TIM Brasil has invested over 16 billion reais, most of which in innovative infrastructures. The industrial plan for the three-year period 2017-2019 envisions investments of approximately 12 billion reais that will be almost completely dedicated to boosting 3G and 4G mobile network development in the country, with the objective to extend the coverage to more than 92% of the population in urban areas.

At TIM Brasil, Research and Development ( **R&D** ) is carried out by the Innovation & Technology Department ( **I&TD** ), headed by the Chief Technology Officer and numbering 27 telecommunications, electric and electronics engineers, IT experts and other technicians of varying expertise, competence and experience, which cover all network operations, pursue innovative solutions and provide support to R&D). The main responsibilities of this department are the definition of the network's technological innovation, evolutionary need for new technologies and devices, architectural guidelines and development of strategic partnerships, so as to exploit the new business models and guarantee the evolution of network infrastructures in line to business strategy.

With respect to infrastructure, one important result was the constitution of the Innovation Lab, consisting of a multi-purpose test environment based in Rio de Janeiro, which is able to guarantee the assessment and validation of innovative services, products and technologies, certifying their functional efficiency and performance and developing new models and configurations and consolidating the innovation flow. The Innovation Lab plays a strategic role in providing support for the conduct of Credibility Tests, Trials and Proofs of Concept, the validation of 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. Along with the R&D department, it facilitates innovation and promotes collaborations with universities and research institutes.

In 2016, 206 validation and innovation projects were completed, which will tend to increase in view of the extensive range of innovation and R&D initiatives underway. The latest technological plan approved (2017-2019), envisages investments in excess of 24 million reais in this project, which also includes the construction of a new Innovation center (at the Corporate Executive Offices complex) in Barra da Tijuca, in the state of Rio de Janeiro. This new center, which will operate as a national reference point for R&D activities will host technicians and researchers and serving as an open space of innovation for new opportunities and the development of innovation for the Brazilian telecommunications market.

***Relevant stakeholders***

TIM Brasil develops synergies and partnerships with important stakeholders with proven experience in R&D. The most relevant are:

- TIM Lab;
  
- the suppliers, for the joint development of solutions in accordance with the technical requirements of TIM;
  
- research centers and universities, for cooperation and joint projects;
  
- government Ministries;
  
- non-governmental organization; and
  
- alliance and industry forums.

***Relevant issues***

The Innovation & Technology department has worked on projects 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.