

TIM PARTICIPACOES SA
Form 20-F
April 10, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F

(Mark One)

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

OR

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE
ACT OF 1934**

For the fiscal year ended December 31, 2018

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

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: 001-14491

TIM PARTICIPAÇÕES S.A.

(Exact name of Registrant as specified in its charter)

TIM HOLDING COMPANY

(Translation of Registrant's name into English)

THE FEDERATIVE REPUBLIC OF BRAZIL

(Jurisdiction of incorporation or organization)

João Cabral de Melo Neto Avenue, 850 – North Tower – 12th floor
22775-057 Rio de Janeiro, RJ, Brasil
(Address of principal executive offices)

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(Name, Telephone, E-mail and/or Facsimile Number and Address of Company Contact Person)

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

Title of each class	Name of each exchange on which registered
Common Shares, without par value*	New York Stock Exchange
American Depositary Shares, as evidenced by American Depositary Receipts, each representing five Common Shares	New York Stock Exchange

* Not for trading, but only in connection with the listing of American Depositary Shares on the New York Stock Exchange

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

None

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

None

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.

Title of Class	Number of Shares Outstanding
Common Shares, without par value	2,421,032,479

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes

No

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes

No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes

No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer

Accelerated Filer

Non-accelerated Filer

Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards[†] provided pursuant to Section 13(a) of the Exchange Act.

[†] The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

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

U.S. GAAP

International Financial Reporting Standards as issued by the International Accounting Standards Board

Other

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17

Item 18

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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

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PRESENTATION OF INFORMATION

In this annual report, TIM Participações S.A., a publicly held company (*sociedade anônima*) organized under the laws of the Federative Republic of Brazil, is referred to as “TIM,” “TIM Participações,” the “Company” or the “Holding Company.” References to “we,” “us” and “our” are to TIM together with, where the context so requires and as explained more fully below, TIM S.A. (formerly known as Intelig Telecomunicações Ltda. (“Intelig”) and into which TIM Celular S.A. (“TIM Celular”) was merged in October 2018, and into which TIM Sul S.A. (“TIM Sul”) and TIM Nordeste Telecomunicações S.A. (“TIM Nordeste”) were ultimately merged in May 2005), a directly wholly owned operating subsidiary of the Holding Company and a corporation organized under the laws of the Federative Republic of Brazil.

References in this annual report to the “common shares” are to the common shares of TIM. References to the “American Depositary Shares” or “ADSs” are to TIM’s American Depositary Shares, each representing five common shares. The ADSs are evidenced by “American Depositary Receipts,” or “ADRs,” which are listed on the New York Stock Exchange, or the NYSE, under the symbol “TSU.”

Market Share Data

We calculate market share information based on information provided by Brazil’s National Telecommunications Agency (*Agência Nacional de Telecomunicações*), or Anatel. We calculate penetration data based on information provided by the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística*), or IBGE.

Presentation of Financial Information

We maintain our books and records in *reais*. The consolidated financial statements included in this annual report were prepared in accordance with International Financial Reporting Standards, or IFRS, as issued by the International Accounting Standards Board, or IASB. As a complement to the IFRS principles, the Company also applies accounting practices established under Brazilian corporate law and rules issued by the Securities and Exchange Commission of Brazil (*Comissão de Valores Mobiliários*), or CVM, for the Brazilian Stock Market Exchange and Anatel to comply with the regulatory requirements. The selected financial information for the Company included in “Item 3. Key Information—A. Selected Financial Data” should be read in conjunction with, and is qualified in its entirety by, the IFRS financial statements of the Company and “Item 5. Operating and Financial Review and Prospects” appearing elsewhere in this annual report.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying our accounting policies. Those areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements, are disclosed in Note 3 to our consolidated financial statements.

All references herein to the “*real*,” “*reais*” or “R\$” are to the Brazilian *real*, the official currency of Brazil. All references to “U.S. dollars,” “dollars” or “U.S.\$” are to United States dollars.

Solely for the convenience of the reader, we have translated some amounts included in “Item 3. Key Information—A. Selected Financial Data” and elsewhere in this annual report from *reais* into U.S. dollars using the commercial selling exchange rate as reported by the Central Bank of Brazil (*Banco Central do Brasil*), or Central Bank, at December 31, 2018 of R\$3.8748 to U.S.\$1.00. These translations should not be considered representations that any such amounts have been, could have been or could be converted into U.S. dollars at that or at any other exchange rate. Such translations should not be construed as representations that the *real* amounts represent or have been or could be converted into U.S. dollars as of that or any other date. See “Item 3. Key Information—A. Selected Financial Data—Exchange Rates” for information regarding exchange rates for the Brazilian currency.

Certain figures included in this annual report have been subject to rounding adjustments. Accordingly, figures shown as totals in certain tables may not be an arithmetic aggregation of the figures that precede them.

The “Technical Glossary” at the end of this annual report provides definitions of certain technical terms used in this annual report and in the documents incorporated in this annual report by reference.

FORWARD-LOOKING INFORMATION

This annual report contains statements in relation to our plans, forecasts, expectations regarding future events, strategies and projections, which are forward-looking statements and involve risks and uncertainties and are therefore, not guarantees of future results. Forward-looking statements speak only as of the date they were made, and we undertake no obligation to update publicly or revise any forward-looking statements after we file this annual report because of new information, future events and other factors. We and our representatives may also make forward-looking statements in press releases and oral statements. Statements that are not statements of historical fact, including statements about the beliefs and expectations of our management, are forward-looking statements. Words such as “anticipate,” “believe,” “estimate,” “expect,” “forecast,” “intend,” “plan,” “predict,” “project” and “target” and similar intended to identify forward-looking statements, which necessarily involve known and unknown risks and uncertainties. Our actual results and performance could differ substantially from those anticipated in our forward-looking statements. These statements appear in a number of places in this annual report, principally in “Item 4. Information on the Company” and “Item 5. Operating and Financial Review and Prospects,” and include, but are not limited to, statements regarding our intent, belief or current expectations with respect to:

- Brazilian telecommunications industry conditions, size and trends;
- characteristics of competing networks’ products and services;
- estimated demand forecasts;
- the size of our subscriber base, particularly any increase in our postpaid subscribers;
- development of additional sources of revenue;
- strategy for marketing and operational expansion;
- achieving and maintaining customer satisfaction;
- development of higher profit margin activities, attaining higher margins, and controlling customer acquisition and other costs; and
- capital expenditures forecasts, funding needs and financing resources.

Because forward-looking statements are subject to risks and uncertainties, our actual results and performance could differ significantly from those anticipated in such statements and the anticipated events or circumstances might not occur. The risks and uncertainties include, but are not limited to:

- our ability to successfully implement our business strategies;
- economic conditions in Brazil and hindrance of growth due to ongoing corruption investigations nationally involving political officials and major Brazilian companies;
- an increase in competition from other players and services in the telecommunications industry, particularly global and local Over The Top, or OTT, players (operators such as mobile virtual network operators or branded resellers offering content and services on the Internet without owning their own proprietary telecommunications network infrastructure);

- increased consolidation in the Brazilian wireless telecommunications market;
- our ability to develop and introduce new and innovative technologies that are received favorably by the market, and to provide “Value-Added Services,” which are services and applications that provide additional functionality to the basic transmission services offered by a telecommunications network, to encourage the use of our network;
- our ability to expand our services while maintaining the quality of services provided and a positive customer experience;

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- system technology failures, which could negatively affect our revenues and reputation;
- our ability to operate efficiently and to refinance our debt as it comes due, particularly in consideration of political and economic conditions in Brazil and uncertainties in credit and capital markets;
- performance of third party service providers and key suppliers on which we depend;
- government policy and changes in the regulatory environment or in the legal framework in Brazil, particularly as an economic group classified as having significant market power in some markets;
- our dependence on authorizations granted by the Brazilian government;
- the effect of inflation and exchange rate fluctuations; and
- other factors identified or discussed under “Item 3. Key Information—D. Risk Factors” and elsewhere in this annual report.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

A. Selected Financial Data

The selected financial data presented below should be read in conjunction with our consolidated financial statements, including the notes thereto. Our consolidated financial statements included herein, the consolidated balance sheets as of December 31, 2018 and 2017, and the results of operations and cash flows for each of the three years in the period ended December 31, 2018 have been audited by PricewaterhouseCoopers Auditores Independentes. The report of PricewaterhouseCoopers Auditores Independentes on the consolidated financial statements appear elsewhere in this annual report.

The following table presents a summary of our historical consolidated financial and operating data for each of the periods indicated. Solely for the convenience of the reader, *real* amounts as of and for the year ended December 31, 2018 have been translated into U.S. dollars at the commercial market rate in effect on December 31, 2018 (as reported by the Central Bank of R\$3.8748 to U.S.\$1.00). See “—Exchange Rates” for information regarding exchange rates for the Brazilian *real*. You should read the following information together with our consolidated financial statements and the notes thereto included elsewhere in this annual report and with “Item 5. Operating and Financial Review and Prospects.”

	As of and for the Year Ended December 31,					
	2018	2018	2017	2016	2015	2014
	U.S.\$(2)	R\$(2)	R\$	R\$	R\$(1)	R\$(1)
	(thousands of <i>reais</i> or U.S. dollars, unless otherwise indicated)					
Income Statement Data:						
Revenue	4,382,505	16,981,329	16,233,959	15,617,413	17,142,265	19,502,116
Cost of services provided and goods sold	(1,987,565)	(7,701,418)	(8,002,077)	(7,693,406)	(8,306,857)	(10,083,920)
Gross income	2,394,939	9,279,911	8,231,882	7,924,007	8,835,408	9,418,196
Operating income (expenses)						
Selling expenses	(1,282,848)	(4,970,780)	(4,575,177)	(4,719,029)	(4,822,974)	(5,029,870)
General and administrative expenses	(415,071)	(1,608,319)	(1,424,623)	(1,258,722)	(1,195,277)	(1,130,754)
Other income (expenses), net	(73,111)	(283,289)	(298,710)	(522,060)	434,283	(775,031)
Operating income	623,909	2,417,523	1,933,352	1,424,196	3,251,440	2,482,541
Financial income (expenses)	(138,674)	(537,333)	(497,836)	(410,880)	(250,407)	(280,642)
Income before income and social contribution taxes	485,235	1,880,190	1,435,516	1,013,316	3,001,033	2,201,898
Income and social contribution taxes	171,599	664,911	(201,009)	(262,889)	(915,591)	(652,795)
Net income for the year	656,834	2,545,101	1,234,507	750,427	2,085,442	1,549,102
Basic earnings per share	0.27	1.05	0.51	0.31	0.86	0.64
Diluted earnings per share	0.27	1.05	0.51	0.31	0.86	0.64
Number of shares outstanding:						
Common shares (in millions)	2,421	2,421	2,421	2,421	2,421	2,421
Dividends per share	0.08	0.30	0.11	0.06	0.19	0.15
Balance Sheet Data:						
Property, plant, equipment and intangibles assets	5,648,195	21,885,626	22,151,015	21,717,105	20,626,541	18,237,563
Total assets	8,247,623	31,957,889	32,600,365	34,655,680	35,556,388	32,489,192
Borrowing and financing	929,878	3,603,091	6,578,115	6,719,782	7,926,436	6,754,419
Shareholders' equity	5,108,609	19,794,837	18,151,184	17,187,513	16,577,332	14,952,014
Capital stock	2,546,273	9,866,298	9,866,298	9,866,298	9,866,298	9,866,298
Cash Flow Data:						
Operating Activities:						
Net cash from operations	1,581,859	6,129,387	5,404,112	4,992,248	4,278,184	6,441,018
Investing Activities:						
Net cash from investment activities	(988,547)	(3,830,420)	(4,400,575)	(4,288,299)	(2,804,934)	(6,840,750)
Financing Activities:						
Net cash from financing activities	(1,079,838)	(4,184,155)	(3,171,005)	(1,736,166)	(605,839)	345,082
Increase (decrease) in cash and cash equivalents, net	(486,525)	(1,885,188)	(2,167,468)	(972,217)	867,411	(54,650)
Cash and cash equivalents at the beginning of the year	764,096	2,960,718	5,128,186	6,100,403	5,232,992	5,287,642
	277,570	1,075,530	2,960,718	5,128,186	6,100,403	5,232,992

Cash and cash equivalents at end
of the year

(1) Revised figures reported on our annual report on Form 20-F issued on April 10, 2017, as explained in Note 2(e) of our consolidated financial statements presented therewith.

(2) Includes the impact of the adoption of IFRS 9 and IFRS 15, as explained in Note 2(f) of our consolidated financial statements presented herewith.

Brazilian Economic Environment

Our business, prospects, financial condition and results of operations are dependent on general economic conditions in Brazil. The table below sets forth data regarding gross domestic product, or GDP, inflation, interest rates and *real*/U.S. dollar exchange rates in the periods indicated:

	2018	2017	2016	2015	2014
GDP growth (contraction) (%) ⁽¹⁾	1.3	1.0	(3.6)	(3.8)	0.5
Inflation (deflation) – IGP-M (%) ⁽²⁾	7.34	(1.91)	7.17	10.54	3.67
Inflation (deflation) – IPCA (%) ⁽³⁾	3.75	2.95	6.29	10.67	6.41
SELIC (%) ⁽⁴⁾	6.50	7.00	13.75	14.25	11.75
DI Rate (%) ⁽⁵⁾	6.40	9.93	14.00	13.18	10.77
TJLP (%) ⁽⁶⁾	6.98	7.00	7.50	7.00	5.00
Appreciation (devaluation) of the real against the U.S. dollar (%)	(18.50)	(1.50)	16.54	(47.01)	(13.39)
Exchange rate (closing) – R\$ per U.S.\$1.00	3.8748	3.3080	3.2591	3.9048	2.6562
Average exchange rate – R\$ per U.S.\$1.00 ⁽⁷⁾	3.6558	3.1925	3.4872	3.3329	2.3541

(1) Brazilian GDP was calculated using the new procedures adopted by the IBGE.

(2) Inflation (IGP-M) is the general market price index as measured by Fundação Getúlio Vargas, or FGV, and represents data accumulated over the 12 months in each year ended December 31.

(3) Inflation (IPCA) is a consumer price index measured by IBGE, and represents data accumulated over the 12 months in each year ended December 31.

(4) The SELIC rate is the average adjusted rate of daily financing determined in the Special Settlement and Custody System (*Sistema Especial de Liquidação e Custódia*) for federal securities (end of period).

(5) The DI rate is the end of period interbank deposit rate in Brazil.

(6) Represents the interest rate applied by the Brazilian Development Bank (*Banco Nacional de Desenvolvimento Econômico e Social*), or BNDES, in long-term financings (end of the period).

(7) Average exchange rate of each year.

Sources: BNDES, Central Bank, Bloomberg, FGV and IBGE.

The year 2018 marked the improvement of the Brazilian economy with the continued recovery of GDP, which grew by 1.3% after declining in 2015 and 2016, mainly driven by services, investments and trade surplus. The trade balance closed the year with a surplus of U.S.\$62 billion, representing a growth of 9.3% compared to 2017. Of note was the 25.4% increase in exports that mostly offset the 28.3% increase in imports. Inflation, measured by the IPCA, was under strict control and, by the end of 2018, it was at 3.75%, below the target set by the Central Bank. The performance is explained by the slow economic recovery and the still relatively high unemployment rate. The SELIC, or basic interest rate, was further reduced in 2018 and closed the year at a historical low of 6.50%, a continued reduction of 0.50 percentage points compared to the closing of 2017. This movement is explained by the still modest economic recovery of the country and the lower expectation of inflation.

Despite the overall positive result, instability continued to mark the political environment, leading to uncertainties regarding the approval of fiscal and political reforms, in particular the public pension reform. Also, the Brazilian economy continued to face uncertainty over the presidential elections in October 2018, in which Jair Bolsonaro was elected. We cannot predict the effects of further political developments on the Brazilian economy, including the policies the future president may adopt or alter during his mandate or the effect that any such policies might have on our business and on the Brazilian economy.

Internationally, the continuous military posturing, particularly between the United States and North Korea, and enhanced trade disputes, especially between the United States and China, brought volatility to the markets, generating strong fluctuations in securities trading and commodities markets. In Europe, levels of economic activity entered a slower growth trajectory, as political tensions within the Eurozone and discussions regarding Brexit continue (see “Item 3. Key Information—D. Risk Factors—We may be impacted by volatility in the global financial markets”). In the United States, government proposals, the 2018 midterm elections, concerns regarding the current administration’s international policy and the U.S. Federal Reserve Board’s monetary policy have set a tone of uncertainty about the sustainability of global economic growth in the years to come.

Exchange Rates

In respect of foreign exchange, the Brazilian real depreciated 18.5% compared to the U.S. dollar in 2018. During the year, the exchange rate fluctuated again this year due to continued reports of corruption cases in Brazil involving political officials and major Brazilian companies, expectations regarding the presidential elections in 2018, adjustments to Brazilian monetary policy, international trade disputes, and reforms proposed by the U.S. government.

In the past, the Brazilian government has implemented various economic plans and utilized a number of exchange rate policies, including sudden devaluations, periodic mini-devaluations during which the frequency of adjustments ranged from a daily to a monthly basis, floating exchange rate systems, exchange controls and dual exchange rate markets. Since 1999, the Central Bank has allowed the *real*/U.S. dollar exchange rate to float freely, and, since that time, the *real*/U.S. dollar exchange rate has fluctuated considerably. We cannot predict whether the Central Bank or the Brazilian government will continue to let the *real* float freely or intervene in the exchange rate market by returning to a currency band system or otherwise. The *real* may depreciate or appreciate substantially against the U.S. dollar.

On April 9, 2019, the selling *real*/dollar exchange rate was R\$3.85 to U.S.\$1.00. The *real*/dollar exchange rate fluctuates and, therefore, the selling rate at April 9, 2019 may not be indicative of future exchange rates.

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

This section is intended to be a summary of more detailed discussions contained elsewhere in this annual report. The risks described below are not the only ones we face. Our business, results of operations or financial condition could be harmed if any of these risks materializes and, as a result, the trading price of our shares and our ADSs could decline.

Risks Relating to our Business

We may be unable to successfully implement our business strategy.

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

Our business strategy is aimed at improving revenues and selective growth, while maintaining financial discipline. To achieve this goal, we seek to strengthen our market position by leveraging mobile telephony to increase broadband usage and by exploiting opportunities arising from fixed-to-mobile substitution.

Another of our more specific strategic efforts is to increase our presence in the residential broadband market. In order to do so, we are investing significant efforts and resources in residential broadband, expanding our fiber optic broadband services, or FTTx, when we provide fixed broadband with optical fiber until near to the customer residence, called TIM Live, and launching our fixed broadband service through the mobile network, a technology known as WTTx service, when we offer broadband through long-term evolution wireless communication, or LTE, (4G) network as a type of fixed wireless access. The provision of FTTx is a highly capital intensive business, bringing

a long term return on investments risk to our operation. As a new business, WTTx brings new risks, particularly related to the market response and customer behavior, that could impact the use of our mobile network resources.

Our ability to implement our strategy is influenced by many factors outside our control, including:

- an increase in the number of competitors in the telecommunications industry that could affect our market share;
- increased competition from mobile virtual network operator, or MVNO, companies, which offer telecommunication services to customers by leasing network capacity from traditional network players, without their own network infrastructure;
- increased competition from global and local OTT, players who offer content and services on the Internet including voice calls and messaging without owning network infrastructure;
- increased competition in our main markets that could affect the prices we charge for our services and could have an unintended adverse effect on our results;
- our ability to strengthen our competitive position in the Brazilian mobile telecommunications market;
- our ability to develop and introduce new and innovative technologies that are received favorably by the market, and to provide Value-Added Services to encourage the use of our network;
- controls and system technology failures, which could negatively affect our revenues and reputation;
- the introduction of transformative technologies that could be difficult for us to keep pace with and could cause a significant decrease in our revenues and/or revenues for all mobile telephone carriers;
- our ability to operate efficiently and to refinance our debt as it comes due, particularly in consideration of political and economic conditions in Brazil and uncertainties in credit and capital markets;
- our ability to most efficiently scale our structure;
- our ability to attract and retain qualified personnel;
- performance of third party service providers and key suppliers on which we depend, such as any difficulties we may encounter in our supply and procurement processes, including as a result of the insolvency or financial weakness of our suppliers;
- government policy and changes in the regulatory environment or legal framework in Brazil;
- the effect of exchange rate and inflation fluctuations;
- the outcome of litigation, disputes and investigations in which we are involved or may become involved;
- the costs we may incur due to unexpected events, in particular where our insurance is not sufficient to cover such costs;
- the real possibility of an increase in taxes by state governments and the Brazilian federal government, or the Federal Government, in order to balance their financial deficit;
- the increasing demand on our system bandwidth to manage the continuous growth of mobile data traffic, which in turn requires further investments in infrastructure or the acquisition of additional spectrum frequencies in order to

maintain network quality and prevent turnover, especially in big cities, where the population is highly concentrated and the costs of network expansion are considerably high; and

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- the renewal of our spectrum licenses over the next several years, given the ongoing changes being proposed in the Brazilian Congress to the telecommunications sector regulatory framework.

As a result of these uncertainties, there can be no assurance that our strategic objectives can effectively be attained in the manner and within the time frame described.

We face increasing competition from other providers and services, which may adversely affect our results of operations.

We face competition throughout Brazil from providers in the personal communications service, or PCS, market. We compete with providers of mobile telecommunication, Voice over Internet Protocol, or VoIP, services and with providers of fixed-line telecommunications and Internet access services, because of the trend towards the convergence and substitution of fixed services for mobile, as well as bundling data and voice services. As a result, the cost of maintaining our revenue share may increase and in the future we may incur higher advertising and other costs as we attempt to maintain or expand our market presence. Other than TIM, the following entities also hold authorizations to provide PCS with national coverage: Claro S.A., under the brand name Claro, Telefônica Brasil S.A., or Telefônica Brasil, under the brand name Vivo, Oi S.A., under the brand name Oi and, Nextel Telecomunicações Ltda., under the brand name Nextel. All PCS providers with national coverage offer third generation, or 3G, and fourth generation, or 4G, mobile telecommunications network technology. Possible market consolidation may allow other telecommunications companies to compete more aggressively against us. Additionally, we may face competitors with greater access to financial resources.

We also expect to face increased competition from other services. Technological changes in the telecommunications field, such as the development and roll-out of 4G and 5G mobile network technology, and VoIP (including offers from third party OTT competitors), are expected to introduce additional sources of competition. OTT applications are often free of charge, other than for data usage, accessible by smartphones, tablets and computers and allow their users to have access to potentially unlimited messaging and voice services over the Internet, bypassing more expensive traditional voice and messaging services such as two-way short (or text) message services known as SMS, which have historically been, but are no longer a source of significant revenues for mobile network operators such as TIM, and now SMS revenue is becoming irrelevant. With the growing use of smartphones in Brazil, an increasing number of customers are using OTT application services as a substitute for traditional voice or SMS communications. As a result of this scenario, we see the migration of traffic from voice to data and consequently the introduction of offers from almost all competitors of unlimited voice plans in their portfolio, accelerating the process of commoditization of voice service. These and other factors are responsible for the increase in competitive pressure we are facing in the mobile market.

OTT application service providers also leverage on existing infrastructures and generally do not operate capital-intensive business models associated with traditional mobile network operators like us. OTT application service providers have recently become more sophisticated competitors, and technological developments have led to a significant improvement in the quality of service, in particular speech quality, delivered by data communications applications from OTT service providers. In addition, players with strong brand capability and financial strengths have turned their attention to the provision of OTT application services. In the long term, if non-traditional mobile voice and data services or similar 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 further declines in mobile monthly average revenue per user, or 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.

OTT service providers concentrate the content, the means to create it and the distribution channel. With these resources they are dedicated to creating new ways the user can interact and consume content. Operators like TIM,

which are as a result challenged to rethink Value-Added Services, may stumble upon limitations beyond technology, such as regulation and as a result not have enough leverage to compete.

We expect that new products and technologies will emerge and that existing products and technologies will be further developed. The advent of new products and technologies such as these could have a variety of consequences for us. New products and technologies may reduce the price of our services by providing lower-cost alternatives, or they may also be superior to, and render obsolete, the products and services we offer and the technologies we use, thus requiring investment in new technology. If such changes occur, our most significant competitors in the future may be new participants in the market without the burden of an installed base of older equipment. The cost of upgrading our infrastructure and technology to continue to compete effectively could be significant.

Rising competition may increase our churn rate and could continue to adversely affect our market share and margins. Our ability to compete successfully will depend on the effectiveness of our marketing efforts and our ability to anticipate and adapt in a timely manner to developments in the industry, including the technological changes and new services that may be introduced, changes in consumer preferences, demographic trends, economic conditions and discount pricing strategies by competitors. It is difficult to predict which of many possible factors will be important in maintaining our competitive position or what expenditures will be required to develop and provide new technologies, products or services to our customers. If we are unable to compete successfully, our business, financial condition and results of operations will be materially adversely affected.

We may be unable to respond to the trend towards consolidation in the Brazilian telecommunications market.

The Brazilian telecommunications market has been subject to consolidation. For example, in September 2014, Telefónica S.A., or Telefónica, entered into a stock purchase agreement to acquire from Vivendi S.A., or Vivendi, all of the shares of GVT Participações S.A., the controlling shareholder of Global Village Telecom S.A., or GVT, and such acquisition, the GVT Acquisition. The GVT Acquisition increased Telefónica's share of the Brazilian telecommunications market, and we believe such trend could continue in the industry as players continue to pursue economies of scale. In June 2017, the Scandinavian group AINMT Holdings, known as Ice Group, acquired 30% of the capital stock of Nextel Brazil from NII Holdings. The agreement between the two companies provided for the possibility of the acquisition of an additional 30% of the Brazilian mobile operator, conditioned on the restructuring of the Company's debt with Brazilian and Chinese banks. This additional acquisition did not occur and the agreement was finalized in February 2018.

The economic and regulatory environment faced by some relevant telecommunications companies in Brazil, such as Oi, Nextel and Sky, could also be expected to encourage the consolidation trend or even the entry of a new competitor in the Brazilian telecommunication market. In 2018, via the issuance of Resolution No. 703/2018, Anatel reduced one of the main regulatory barriers to consolidation in the mobile market. Resolution No. 703/2018 changed the spectrum cap regulation, which allows a given player to retain more spectrum bandwidth (30% to 40% of the total available spectrum) depending on frequency range and applicable antitrust measures. If such consolidation occurs, it may result in increased competition within our market. We may be unable to adequately respond to pricing pressures resulting from consolidation in our market, adversely affecting our business, financial condition and results of operations. We may also consider engaging in merger or acquisition activity in response to changes in the competitive environment, which could divert resources away from other aspects of our business.

In this regard, potential acquisitions have inherent risks such as increasing leverage and debt service requirements, combining company cultures and facilities, potential exposure to successor liability, and the need to raise additional capital, which we may not be able to do. Any of these and other factors could adversely affect our ability to achieve the anticipated cash flows at acquired operations or realize other anticipated benefits of acquisitions, which could affect our reputation and have a material adverse effect on our operations.

We may face difficulties responding to new telecommunications technologies.

The Brazilian wireless telecommunications market is experiencing significant technological changes, as evidenced by the following, among other factors:

- shorter time periods between the introduction of new telecommunication technologies and subsequent upgrades or replacements;
- the expansion of 4G technology, and the introduction of improvements thereto, also known as 4.5G, along with future development of 5G technology and simultaneous management of multiple technology legacy layers, such as

GSM, 3G, and 4G through different spectrum bands, which also involves managing the LTE radio access network, or RAN, sharing agreement among TIM and other companies (see “Item 4. Information on the Company—B. Business Overview—Site-Sharing and Other Agreements”);

- an increase in market competition in respect of residential fixed ultra-broadband, requiring operators (including former fixed internet providers which had provided services using copper and coaxial technologies) to accelerate investments in fiber capillarity deployments;
- new customer behaviors, particularly migrating services from voice to data, requiring new planning models and accelerating the evolution of communications to increasingly occur on the IP network;
- ongoing improvements in the capacity and quality of digital technology available in Brazil;
- the launch of voice over LTE, known as VoLTE, which increase significantly the quality of voice calls and allows companies to traffic voice as data through their 4G networks;
- the expansion of the Internet of Things, or IoT, technology in all of its forms and applications, requiring the creation of new platforms enabling operation in new areas of the value chain;
- the forthcoming introduction of 5G technology, which creates specific demands on bandwidth and performance, and takes advantage of network virtualization, distributed cloud at the wireless edge, and allows multiple logical networks to run on top of a shared physical network infrastructure, known as network slicing, for traffic control in a service-based architecture;
- continued auction of licenses for the operation of additional bandwidth;
- the development of cloud solutions to provide platform as a service (PaaS), software as a service (SaaS), or infrastructure as a service (IaaS), in order to drive down costs;
- the introduction of artificial intelligence, or AI, and machine learning in order to use resources more efficiently, reduce spending and increase agility; and
- the development of user interface, or UI, and user experience, or UX, technology.

We may be unable to keep pace with these technological changes, which could affect our ability to compete effectively, and the investment required to adopt these new technologies will be significant, both of which could have a material adverse effect on our business, financial condition and results of operations.

Our operations depend on our ability to efficiently operate our systems and controls that are subject to failure that could affect our business and our reputation.

Our success largely depends on the continued and uninterrupted performance of our controls, network technology systems and of certain hardware. Our technical infrastructure (including our network infrastructure for mobile telecommunications services) is vulnerable to damage or interruption from information and telecommunication technology failures, power loss, floods, windstorms, fires, terrorism, intentional wrongdoing, human error and similar events. Our controls are dependent, not exclusively, on these technological systems and are also subject to the interruptions and failures. Unanticipated problems with our controls, or at our facilities, system failures, hardware or software failures, computer viruses or hacker attacks 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 harm our levels of customer satisfaction, our reputation and compliance with certain of our regulatory obligations.

Sophisticated information and processing systems are vital to our growth and our ability to monitor costs, render monthly invoices, process customer orders, provide customer service and achieve operating efficiencies. We cannot

assure that we will be able to successfully operate and upgrade our information and processing systems or that they will continue to perform as expected. Any failure in our accounting, information and processing systems could impair our ability to collect payments from customers and respond satisfactorily to customer needs, which could adversely affect our business, financial condition and results of operations.

Our business is dependent on our ability to expand our services while maintaining the quality of the services provided and a positive customer experience.

Our business as a telecommunications services provider depends on our ability to maintain and expand our telecommunications services network. We believe that our expected growth will require, among other things:

- continuous development of our controls and operational and administrative systems;
- efficiently allocate our capital;
- increasing marketing activities;
- improving our understanding of customer wants and needs;
- continuous attention to service quality;
- a positive customer experience;
- attracting, training and retaining qualified management, technical, customer relations, and sales personnel; and
- increased network capacity through new spectrum acquisition and/or more investment in network assets.

We believe that these requirements will place significant demand on our managerial, operational and financial resources. Failure to manage successfully our expected growth could reduce the quality of our services and result in an inadequate customer experience, with adverse effects on our business, financial condition and results of operations.

Our operations are also dependent upon our ability to maintain and protect our network. Damage to our network and backup systems could result in service delays or interruptions and limit our ability to provide customers with reliable service over our network. The occurrence of any event that damages our network may adversely affect our business, financial condition and results of operations.

We face various cyber-security risks that, if not adequately addressed, could have an adverse effect on our business.

We face various cyber-security risks that could result in business losses, including, but not limited to, contamination (whether intentional or accidental) of our networks and systems by third parties with whom we exchange data, equipment failures, unauthorized access to and loss of confidential customer, employee and/or proprietary data by persons inside or outside our organization. We are also exposed to cyber-attacks causing systems degradation or service unavailability, the penetration of our information technology systems and platforms by malicious third parties, and infiltration of malware (such as computer viruses) into our systems.

Cyber-attacks against companies have increased in frequency, scope and potential harm in recent years. Further, the perpetrators of cyber-attacks are not restricted to particular groups or persons. These attacks may be committed by company employees or third parties operating in any region, including jurisdictions where law enforcement measures to address such attacks are unavailable or ineffective. We may not be able to successfully protect our operational and information technology systems and platforms against such threats. There can be no assurance that we will be successful in preventing cyber-attacks or successfully mitigating their effects. Similarly, there can be no assurance that we or our third-party providers and other contractors will be successful in protecting our customers' personal data and other data that is stored on our and their systems. Further, as cyber-attacks continue to evolve, we may incur

significant costs in the attempt to modify or enhance our protective measures or investigate or remediate any vulnerability.

The inability to operate our networks and systems as a result of cyber-attacks, even for a limited period of time, may result in significant expenses to us and/or a loss of market share to other communications providers. The costs associated with a major cyber-attack could include expensive incentives offered to existing customers and business partners to retain their business, increased expenditures on cyber-security measures and the use of alternate resources, lost revenues from business interruption and litigation. If we are unable to adequately address these cyber-security risks, or operating network and information systems could be compromised, which would have an adverse effect on our business, financial condition, reputation and results of operations.

Certain debt agreements of our subsidiary contain financial covenants and any default under such debt agreements may have a material adverse effect on our financial condition and cash flows.

Certain of our existing debt agreements contain restrictions and covenants and require the maintenance or satisfaction of specified financial ratios and tests. See “Item 5. Operating and Financial Review and Prospects.” The ability of our subsidiary to meet these financial ratios and tests can be affected by events beyond our and their control, and we cannot assure that it will meet those tests. Failure to meet or satisfy any of these covenants, financial ratios or financial tests could result in an event of default under these agreements. As of December 31, 2018, we had approximately R\$1,663 million in consolidated outstanding indebtedness, of which 32% was denominated in foreign currency (primarily U.S. dollars), for which we use derivative instruments to offset exposure to foreign currency. If we are unable to meet these debt service obligations, or comply with these debt covenants, we could be forced to restructure or refinance this indebtedness, seek additional equity capital or sell assets.

Due to the nature of our business we are exposed to numerous lawsuits, consumer claims and tax-related proceedings.

Our business exposes us to a variety of lawsuits and other proceedings brought by or on behalf of consumers in the ordinary course of our operations as a mobile telecommunications provider in Brazil. We are subject to a number of public civil actions and class actions that have been brought against mobile telecommunications providers in Brazil relating principally to the expiration of prepaid usage credits, minimum term clauses, subscription fees and the use of land to install our network sites. These suits include claims contesting certain aspects of the fee structure of our prepaid plans, hybrid (monthly billed fixed price), or so-called Control plans and postpaid plans, which are commonplace in the Brazilian telecommunications industry.

In addition, federal, state and municipal tax authorities have questioned some tax procedures we have adopted, and have raised questions regarding the calculation of the basis for certain sector-specific contributions (FUST and FUNTTEL, as each are defined in “Item 4. Information on the Company—B. Business Overview—Taxes on Telecommunications Goods and Services”). As of December 31, 2018, we are subject to approximately 3,054 tax-related lawsuits and administrative proceedings with an aggregate value of approximately R\$16.8 billion, classified as “probable loss” and “possible loss” by our legal advisors.

An adverse outcome in, or any settlement of, these or other lawsuits could result in losses and costs to us, with an adverse effect on our business practices and results of operations. For some of these lawsuits, we were not required to and have not established any provision on our statement of financial position or have established provisions only for part of the amounts in controversy, based on our judgments or opinions of our legal counsel as to the likelihood of winning these lawsuits. In addition, our senior management may be required to devote substantial time to these lawsuits, which they could otherwise devote to our business. See Note 24 to our consolidated financial statements.

Any modification or termination of our ability to use the “TIM” trade name may adversely affect our business and operating results.

We have been authorized by Telecom Italia S.p.A., or Telecom Italia, who owns the rights to the “TIM” trade name, to use the TIM trademark. However Telecom Italia could terminate this authorization at any time. The loss of use of the trademark name “TIM” may have a material adverse effect on our business and operating results.

We are subject to credit risk with respect to our customers.

Our operations depend to a significant extent on the ability of our customers to pay for our services. Under Anatel regulations, we are allowed to undertake certain measures to reduce customer defaults, such as restricting or limiting

the services we provide to customers with a history of defaults. If we are unable to undertake measures to limit payment defaults by our subscribers or that allow us to accept new subscribers based on credit history, we will remain subject to outstanding uncollectible amounts, which could have an adverse effect on our results of operations. See “Item 5. Operating and Financial Review and Prospects.”

We may be subject to liability related to outsourcing certain functions to third-party service providers.

We may be exposed to contingent liabilities due to our outsourcing of certain functions to third-party service providers for which we may not have made sufficient provisions. Such potential liabilities may involve claims by third party providers that are treated as direct employees as well as claims for secondary liability resulting from work place injury, wage parity and overtime pay complaints. Our financial condition and results of operation may be adversely affected in the event that a material portion of these liabilities are decided against us, for which we have not made provisions.

Furthermore, recent government announcements and legal proceedings have called into question the ability of public services concessionaires to carry out their operations by outsourcing certain functions. Though no definitive position has been reached by any governmental authority, recent court opinions could set legal precedent that could call into question our ability to outsource certain operations.

If the contracting of third party services are considered to involve the main activities of the company, it may be characterized as a direct employment, which would significantly increase our costs and as a result we may be subject to administrative proceedings by the relevant labor authorities and may be required to pay fines to the third party service providers.

We depend on key suppliers, certain inputs and contractual relationships with other telecommunications providers which are critical to our ability to provide telecommunications services to our customers.

We rely on various vendors to supply network equipment, mobile handsets and accessories necessary for our business. These suppliers may, among other things, delay delivery periods, increase their prices, limit the amounts they are willing to supply to us, or may suffer disruptions in their own supply chains. If these suppliers are unable or unwilling to provide us with equipment or supplies on a regular basis, we could face difficulties in carrying out our operations, which could negatively affect our results of operations and limit our ability to execute our agreements.

Furthermore, the constant changes in the telecommunications industry, such as growth of broadband, may result in a limited supply of equipment essential for the provision of services. The restrictions on the number of manufacturers imposed by the Brazilian government for certain inputs pose certain risks, including susceptibility to currency fluctuations and the imposition of customs or other duties for those inputs which are imported. Inputs produced domestically are available from a limited number of domestic suppliers, and accordingly we are highly dependent upon their ability to accurately forecast the domestic demand and manage inventory. The foregoing risks could limit our ability to acquire such inputs in a timely and cost effective manner.

The need to hire many key suppliers requires complex deals, detailed and timely analysis of contractual documents and an integrated, end-to-end management process. We may be subject to failures in the contract or contract management systems and process, which may affect our business and financial condition.

We also rely on certain other telecommunications providers, through contractual agreements with us, to supply key infrastructure and other services, such as Industrial Exploration of Dedicated Lines (*Exploração Industrial de Linhas Dedicadas*), or EILD, interconnection and co-billing (see “Item 4. Information on the Company—B. Business Overview—Site-Sharing and Other Agreements”). Anatel permits such agreements between telecommunications providers in order to avoid unnecessary duplication of networks and infrastructure, and to lower costs and increase penetration of wireless services in Brazil.

In June 2016, one telecommunications provider that we maintain a contractual relationship with, Oi, filed for judicial reorganization (a form of bankruptcy protection under Brazilian law), acknowledging its inability to sustain its

financial obligations. The judicial reorganization plan was approved at Oi's general shareholders meeting in December 2017, after intense negotiations among credit holders and shareholders, and was judicially ratified in January 2018 subject to certain reservation regarding the terms of the judicial reorganization, mainly regarding Oi's relationship with its creditors. In March 2018, through a joint withdrawal of proceedings, TIM and Oi settled their claims, which were generally related to infrastructure and interconnection, via a dedicated conflict resolution process at Anatel.

Our infrastructure could be damaged as a result of natural disasters or other unexpected events.

Our operations may be suspended or interrupted for an indeterminate period if any of our transmission bases are damaged by natural disasters, including by fire, explosion, storms or any other unexpected events. If we are unable to prevent against such damage in the event of a natural disaster and any other unexpected events, the interruption of our operations could have a material adverse effect on the continuity of our operations, financial results and the compliance with regulations.

We use demand forecasts to make investments, however such forecasts may ultimately be inaccurate due to economic volatility and result in lower revenues than expected.

We make certain investments, such as the procurement of materials and the development of our network infrastructure, based on our forecasts of the amount of demand that customers will have for our services at a later date. However, any major changes in the Brazilian economic scenario may affect this demand and therefore our forecasts may turn out to be inaccurate. As a result, it is possible that we may make larger investments based on demand forecasts than were necessary given actual demand at the relevant time, which may directly affect our cash flow. Unanticipated improvements in economic conditions may have the opposite effect and equally pose a risk.

The management of our cash and our financial investments are also subject to the country's economic conditions. We may make financial allocations in which the results of operations are not as expected, generating lower profitability or costs.

Our governance and compliance processes may fail to prevent regulatory penalties and reputational harm.

We operate in a global environment, as we have agreements with companies all over the world. Our governance and compliance processes, which include the review of internal control over financial reporting, may not prevent future breaches of all applicable legal, accounting or corporate governance standards. We may be subject to breaches of our Code of Ethics, anti-corruption policies and business conduct protocols and to instances of fraudulent behavior, corrupt practices and dishonesty by our employees, contractors or other agents. Our failure to comply with applicable laws and other standards could subject us to fines, loss of operating licenses and reputational harm.

Improper use of our networks could adversely affect our costs and results of operations.

We may incur costs associated with the unauthorized and fraudulent use of our networks, including administrative and capital costs associated with detecting, monitoring and reducing the incidence of fraud. Fraud also affects interconnection costs and payments to other carriers for non-billable fraudulent roaming. Improper use of our network could also increase our selling expenses if we need to increase our provision for doubtful accounts to reflect amounts we do not believe we can collect for improperly made calls. Any increase in the improper use of our network in the future could materially adversely affect our costs and results of operations.

We may be unable to implement our plans to expand and enhance our existing networks in Brazil in a timely manner or without unanticipated costs, which could hinder or prevent the successful implementation of our business plan and result in revenues and net income being less than expected.

Our ability to achieve our strategic objectives depends in large part on the successful, timely and cost-effective implementation of our plans to expand and enhance our networks in Brazil. Factors that could affect this implementation include:

- our ability to generate cash flow or to obtain future financing necessary to implement our projects;

- delays in the delivery of telecommunications equipment by our vendors;

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- the failure of the telecommunications equipment supplied by our vendors to comply with the expected capabilities;
- delays in obtaining licenses required to carry out construction works and other activities necessary to implement and update our network; and
- delays resulting from the failure of third-party suppliers or contractors to meet their obligations in a timely and cost-effective manner.

Although we believe that our cost estimates and implementation schedule are reasonable, we cannot assure you that the actual costs or time required to complete the implementation of these projects will not substantially exceed our current estimates. Any significant cost overrun or delay could hinder or prevent the successful implementation of our business plan and result in revenues and net income being less than expected.

Risks Relating to the Brazilian Telecommunications Industry

Anatel classified us as an economic group with significant market power in some markets and are now subject to increased regulation.

The National Telecommunications Agency (*Agência Nacional de Telecomunicações*), or Anatel, is the Brazilian regulatory agency for the telecommunications created under the Federal Law No. 9,472 of 1997 (*Lei Geral de Telecomunicações*), or the General Telecommunications Law.

Under Anatel's general plan for competition goals (*Plano Geral de Metas de Competição*), or PGMC 2012, we had been classified as having significant market power, or SMP, in the following relevant markets: (i) passive infrastructure in transport and access networks (provision of cellular towers); (ii) mobile network termination (otherwise referred to as the mobile network termination market); and (iii) national roaming.

In July 2018, ANATEL published in Resolution No. 694/2018, or the "New PGMC", revising the PGMC 2012. Under the New PGMC, TIM has been classified as having SMP in the following relevant markets: (i) mobile network; (ii) national roaming; and (iii) high capacity data transport. The main difference is that TIM no longer has SMP in passive transport infrastructure and access networks (provision of cellular towers) but has now been classified as having SMP in the high capacity data transport segment.

Due to such classification, we are subject to increased regulation under the PGMC, which could have an adverse effect on our business financial condition, results of operations and compliance with regulations. On July 4, 2014, Anatel approved, by means of Resolution No. 639/2014, a rule for the definition of maximum reference rates for entities with significant market power, based on a cost model, for Value of Use of Mobile Network (Valor de Uso de Rede Móvel), or VU-M, as well as the termination of calls on local fixed line networks, or TU-RL, and EILD. Pursuant to Anatel's rule, reference rates have been decreasing based on a glide path until the cost modeling known as Bottom-Up Long-Run Incremental Cost, or BU-LRIC, which takes into consideration all long-run incremental costs, updated to current values, of providing a particular service and the unit costs of such service based on an efficient network considering the existing regulatory obligations, is applied (2019 for VU-M and TU-RL, and 2020, for EILD). On July 7, 2014, Anatel published the corresponding Acts No. 6,210/2014, 6,211/2014 and 6,212/2014, which determined the specific reference rates effective as of February 2016. On December 18, 2018, Anatel published the corresponding Acts No. 9,019/2018, 9,020/2018 and 9,021/2018, which determined the specific reference rates effective as of February 2019.

TIM has filed an administrative appeal against the Wholesale Products Reference Offer (*Oferta de Referência de Produtos de Atacado*), or ORPAs, of the Telefônica and Claro groups, which were approved by Anatel, on the grounds that such ORPAs did not comply with the aforementioned cost modeling requirements. Anatel has not yet handed down a determination on our appeal on the merits. TIM had filed an administrative appeal against Oi as well, but considering the agreement reached between the companies in March 2018 and discussed above, we withdrew this claim.

Because of our classification as SMP in the national roaming market, we must also offer roaming services at regulated rates to other mobile providers without SMP. We are also required to provide other providers without significant market power access to our towers and masts due to our classification as SMP in that portion of the passive infrastructure market.

Our radio frequency, or RF, authorizations for the 800 MHz, 900 MHz and 1,800 MHz bands that we use to provide PCS services started to expire in September 2007 and are renewable for one additional 15-year period, requiring payment at every two-year period equal to 2% of the prior year's revenue net of taxes, by way of investment under the Basic and Alternative Service Plans, which are intended to increase telecommunications penetration throughout Brazil. Anatel has stated that the revenue on which the 2% payment is based should be calculated as including revenues derived from interconnection as well as additional facilities and conveniences. As a result, we are currently disputing these RF authorization renewal payments both administratively and judicially. Although there are administrative procedures still pending on analysis, Anatel has denied the Company's appeals and issued Precedent No. 13, determining that revenues from interconnection as well as additional facilities and conveniences should be considered on the basis of the calculation of the price due to the renewal of the spectrum licenses. Judicially, the matter is also still under dispute.

We cannot assure that we will be able to fully comply with each of the applicable laws, regulations and authorizations or that we will be able to comply with future changes in the laws and regulations to which we are subject. These regulatory developments or our failure to comply with them could have a material adverse effect on our business, financial condition and results of operations.

As a telecommunications provider, we are subject to extensive legal and regulatory obligations in the performance of our activities which may limit our flexibility in responding to market conditions, competition and changes in our cost structure or with which we may be unable to comply.

Our business is subject to extensive government regulation, including any changes that may occur during the period of our authorization to provide telecommunication services. Anatel, which is the main telecommunications industry regulator in Brazil, regulates, among others: (i) industry policies and regulations; (ii) licensing; (iii) rates and tariffs for telecommunications services; (iv) competition; (v) telecommunications resource allocation; (vi) service standards; (vii) technical standards; (viii) quality standards; (ix) consumer rights; (x) interconnection and settlement arrangements; and (xi) coverage obligations.

In addition to the rules set forth by Anatel, we are subject to compliance with various legal and regulatory obligations, including, but not limited to, obligations arising from the following: (i) PCS authorizations under which we operate our cellular telecommunications business; (ii) fixed authorizations (local, national long distance, international long distance and multimedia service) under which we operate our telecommunications business; (iii) limited private services authorization under which we operate a private network formed by point-to-point radio communication (*radioenlaces*); (iv) the Consumer Defense Code; (v) the General Telecommunications Law; and (vi) the Data Protection Law (Law No. 13,709/2018, as amended).

In addition, we are also subject to national and international anti-corruption laws. We believe that we are currently in material compliance with our obligations arising out of each of the above referenced laws, regulations and authorizations.

Over the last few years, Anatel has instituted certain administrative processes against the Company and other Brazilian telecommunications providers to investigate certain alleged nonconformities related to quality goals and other regulatory obligations. In response to the initiation of such Anatel proceedings, the Company, as well as other active telecommunications companies in the Brazilian market, opted for the negotiation and conclusion of a Term of

Conduct Adjustment, or TAC. The TAC aims at the remediation of the underlying causes of the ongoing administrative processes by setting commitments for conduct adjustment and investment on additional projects in general.

Currently, the proceeding is pending deliberation by Anatel's board of directors with a decision expected in 2019. However, despite regulatory oversight, other entities, such as the Federal General Accounting Office and the House of Representatives, intervened in the negotiations and requested further clarification, causing a delay in the procedural process.

We cannot assure that we will be able to fully comply with each of the applicable laws, regulations and authorizations or that we will be able to comply with future changes in the laws and regulations to which we are subject. Moreover, compliance with this extensive regulation, the conditions imposed by our authorization to provide telecommunication services and other governmental action may limit our flexibility in responding to market conditions, competition and changes in our cost structure. These regulatory developments or our failure to comply with them could have a material adverse effect on our business, financial condition and results of operations.

The Brazilian government under certain circumstances may terminate our authorizations or we may not receive renewals of our authorizations.

We operate our business under authorizations granted by the Brazilian government. As a result, we are obligated to maintain minimum quality and service standards, including targets for call completion rates, geographic coverage and voice accessibility, data accessibility, voice drop, data drop, data throughput, user complaint rates and completion rates to our call center. Our ability to satisfy these standards, as well as others, may be affected by factors beyond our control. We cannot assure that, going forward, we will be able to comply with all of the requirements imposed on us by Anatel or the Brazilian government. Our failure to comply with these requirements may result in the imposition of fines or other government actions, including, restrictions on our sales and, in an extreme situation, the termination of our authorizations in the event of material non-compliance.

Any partial or total revocation of our authorizations or failure to receive renewal of such authorizations when they expire would have a material adverse effect on our financial condition and results of operations.

Anatel's proposal regarding the consolidation of prices could have an adverse effect on our results of operations.

We receive interconnection revenues in connection with any call originating from another service provider's network, mobile or fixed line, which is received by any mobile customer, of ours or of another provider's, while using our network. We charge the service provider from whose network the call originates an interconnection fee for every minute our network is used in connection with the call.

Anatel issued regulations on interconnection rules from 1997 to 2014, and, as noted above, in July 2014, established a fully allocated cost model for reference rates by allocating the various service costs to determine a basic price, effective as of February 2016. See "Item 4. Information on the Company—B. Business Overview—Lines of Revenue—Regulation of the Brazilian Telecommunications Industry—Interconnection Regulation."

These regulations may have an adverse effect on our financial results given the dynamics of our revenues and costs related to interconnection fees. In addition, Anatel may allow more favorable prices to operators without significant market power.

Actual or perceived health risks or other problems relating to mobile telecommunications technology could lead to litigation or decreased mobile communications usage, which could harm us and the mobile industry as a whole.

The effects of, and any damage caused by, exposure to electromagnetic fields has been and still is the subject of careful evaluation 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. These concerns could have an adverse effect on the wireless communications industry and, possibly, expose wireless providers, including us, to litigation.

In addition, although Brazilian law already imposes strict limits in relation to transmission equipment, these concerns may cause regulators to impose greater restrictions on the construction of 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. The expansion of our network may be affected by these perceived risks if we experience problems in finding new sites, which in turn may delay the expansion and may affect the quality of our services.

Anatel Resolution No. 700/2018 limits emission and exposure for fields with frequencies between 8.3 kHz and 300 GHz, and Law No. 11,934/2009 establishes limits related to the magnetic and electromagnetic emissions to be as defined by the World Health Organization and requiring that operators had to maintain a record of the measurements of the levels of the magnetic and electromagnetic emissions of each transmitting station.

Any of these or any other additional regulations could adversely affect our business, financial condition and results of operations. Government authorities could also increase regulation of wireless handsets and base stations as a result of these health concerns or wireless companies, including us, could be held liable for costs or damages associated with these concerns, which could have an adverse effect on our business, financial condition and results of operation. We cannot assure you that further medical research and studies will refute a link between the mobile technology in question and these health concerns.

Measures adopted by Anatel aiming to ensure service quality could have an adverse effect on our results.

Anatel has in the past intervened in our business, with the express goal of improving the quality of mobile telecommunications services provided in Brazil, having issued administrative injunctions. In July 2012, Anatel suspended three of the primary mobile providers, including our then-subsubsidiary TIM Celular (merged into TIM S.A. as a result of the Reorganization (as defined below)), from selling and activating new mobile service plans. Anatel lifted the suspension only after these providers made formal commitments to undertake specific investments related to the expansion of their respective networks and improvement of their respective services.

In November 2012, Anatel issued a new administrative injunction to suspend and stop our “Infinity Day” promotion, in which customers from specific states were charged per day of use for voice service to TIM numbers and local fixed telephones. Anatel, in its preliminary analysis, considered the promotion to be potentially harmful to the quality of our mobile services. The injunction was revoked in January 2013, after Anatel determined that the promotion did not pose a risk to the provision of our mobile services.

Although measures adopted by Anatel such as the aforementioned are likely to be temporary, such measures may, along with any new measures adopted in the future, have a material adverse effect on our financial condition, results of operations and cash flow and may limit our ability to implement our business strategy.

Risks Relating to Brazil

Risks related to Brazilian economic and political conditions may negatively affect our business.

Political conditions in Brazil may affect the confidence of investors and the public in general, as well as the development of the economy. In 2018, the Brazilian economy continued to show signs of recovery: GDP grew, inflation was kept under control and the interest rate declined. However, the recent past has been marked by an unstable political environment evidenced by widespread protests and ongoing investigations into allegations of corruption in private and state-controlled enterprises, which contributed to the decline of the confidence of investors and the public in general.

Currently, with the progress of the different investigations carried out by the Federal Police and by the General Prosecutor’s Office, there is significant uncertainty regarding the future of the national political environment and its effect on the Brazilian economy. Some relevant Brazilian companies are facing investigations by the CVM, the U.S. Securities and Exchange Commission, or the SEC, the Brazilian Federal Police and the Brazilian Federal Prosecutor’s Office, in connection with corruption allegations, or the “Lava Jato” investigations. Depending on the duration, outcome and possible expansion of such investigations, the uncertainty could affect the country’s reputation and result in downgrades from rating agencies. We cannot predict the results of the investigations and which policies the Brazilian

government may adopt or change or the effect that might have on our business and on the Brazilian economy.

Presidential elections took place in 2018 and the election of Jair Bolsonaro as president can also significantly change the course of the ongoing fiscal reforms and the economic policies being undertaken. Uncertainty about the new president's adoption and ability to implement new policies may reduce investor and market confidence, and as a result we are unable to predict the country's political and economic direction in coming years.

The Brazilian government has exerted significant influence over the Brazilian economy and continues to do so. This involvement may have an adverse effect on our activities, our business and on the market prices of our shares and ADSs.

The Brazilian government has frequently intervened in the Brazilian economy and occasionally made drastic changes in economic policy. To influence the course of Brazil's economy, control inflation and implement other policies, the Brazilian government has taken various measures, including the use of wage and price controls, currency devaluations, capital controls and limits on imports and freezing bank accounts. We have no control over, and cannot predict what measures or policies the Brazilian government may take or adopt in the future. Our business, financial condition, revenues, results of operations, prospects and the trading price of our securities may be adversely affected by changes in government policies and regulations, as well as other factors, such as: (i) fluctuating exchange rates; (ii) inflation; (iii) interest rates; (iv) fiscal and monetary policies; (v) changes in tax regimes; (vi) liquidity in domestic capital and credit markets; (vii) economic, political and social instability; (viii) reductions in salaries or income levels; (ix) rising unemployment rates; (x) tax policies (including those currently under consideration by the Brazilian Congress); (xi) exchange controls and restrictions on remittances abroad; and (xii) other political, diplomatic, social or economic developments in or affecting Brazil.

Uncertainty regarding changes by the Brazilian government to the policies or standards that affect these or other factors could contribute to economic uncertainty in Brazil and increase the volatility of the Brazilian capital market and of securities issued abroad by Brazilian companies.

Additionally, interruptions in the credit and other financial markets, and the deterioration of the Brazilian and/or global economic environment may, among other effects: (1) have a negative impact on demand, which may reduce sales, operating income and cash flow; (2) decrease consumption of our products; (3) restrict the availability of financing for our operations or investments, or for the refinancing of our debt in the future; (4) cause creditors to modify their credit risk policies and restrict our ability to negotiate any of the terms of our debt in the future; (5) cause the financial situation of our clients or suppliers to deteriorate; or (6) decrease the value of our investments.

Changes in Brazilian tax laws may have an adverse impact on the taxes applicable to our business and over our prices.

Our business is substantially affected by the tax regime in Brazil on telecommunications goods and services, as disclosed in detail in "Item 4. Information on the Company—B. Business Overview—Taxes on Telecommunications Goods and Services."

In the past, the tax on financial operations, or IOF, was levied on investments made in the Brazilian financial and capital markets by foreign investors. However, since October 2014, any financial operation related to these foreign investments benefits from a 0% IOF tax rate.

On July 1, 2015, Decree No. 8,426 came into effect. It restored the obligation of companies to pay *Programa de Integração Social*, or PIS, contributions and *Contribuição Social para o Financiamento da Seguridade Social*, or COFINS, contributions on financial revenues at a cumulative rate of 4.65% (previously set at 0% by Decree No. 5,442/2005). From that date, all financial revenues became taxable, except for financial revenues related to exchange variations of: (i) exportation of goods and services; (ii) obligations undertaken by the company, including loans and

financing. Revenues related to hedging transactions on stock exchange values, also maintain the tax rate at 0% as long as it is related to operating activities and the main objective is to protect the rights and goods of the company.

In addition, Law No. 13,241, published on December 31, 2015, suspended the 0% PIS and COFINS rate on the sale of goods such as smartphones and handsets, which starting from January 1, 2016 were set back to the rate of 7.6% of COFINS and 1.65% for PIS.

Since December 2015, the principal tax applicable to goods and telecommunication services (*Imposto sobre Circulação de Mercadorias e Serviços*), or ICMS, rates were increased in some Brazilian states due to local legislation to an average of 3% and 1%, respectively. Any change in the ICMS rate may affect our financial conditions.

In March 2017, there was a favorable decision of the Brazilian Federal Supreme Court, or STF, published in October, on the composition of the calculation bases of PIS and COFINS. In summary, the court recognized the unconstitutionality of including the ICMS in the calculation of PIS and COFINS, deciding in favor of its exclusion.

Provisional Measure No. 687, published on August 18, 2015 (and converted into Law No. 13,196, which was published on December 2, 2015) authorized the monetary adjustment, based on the IPCA, of the Contribution to the Development of the National Film Industry (*Contribuição para o Desenvolvimento da Indústria Cinematográfica Nacional*), or CONDECINE, which is a tax levied on telecommunications services with the objective of promoting the Brazilian audiovisual industry.

Since January 2018, the tax over Value-Added Services has increased with the inclusion of Value-Added Services revenues in the calculation of ISS due to Law No. 157/2016, which is a municipality tax which rates vary from 2% to 5%.

There have been relevant modifications in tax legislation in 2018. Since January, 2018, the tax incidence over Value-Added Services has increased with the inclusion of those receivables within the ISS basis of calculation due to Law No. 157/2016, which is a municipality tax with rates varying from 2% to 5%. Also, income tax and social contribution were regulated by Decree No. 3,000/1999 in addition to other federal laws and decrees. In December of 2018, this decree was substituted by Decree No. 9,580, which consolidates the main provisions related to income tax and social contribution.

Further changes in tax regulations, such as a possible tax reform already mentioned by the new Federal Government or the previously announced increase of the PIS and COFINS tax rates that the Federal Government was studying to implement in order to restore public accounts after the decision held by the STF authorizing companies to exclude the ICMS from the PIS and COFINS basis of calculation, could impact our financial assets and liabilities as well as our pricing, which could have a material adverse effect on our business, financial condition and results of operations.

Inflation, and government measures to curb inflation, may adversely affect the Brazilian economy and capital market, our business and operations and the market prices of our common shares or the ADSs.

In the recent past, Brazil has experienced high rates of inflation and the government's measures taken in an attempt to curb inflation have had significant negative effects on the Brazilian economy. The government's measures to control inflation have often included maintaining a tight monetary policy with high interest rates, thereby restricting availability of credit and reducing economic growth.

Uncertainty regarding certain future government fiscal measures which may be taken to reduce inflation could affect the confidence of investors and the market in general, and, consequently, affect our operating and financial results and increase volatility in the Brazilian capital markets.

Exchange rate movements and interest rate fluctuation may have an adverse effect on our business and the market prices of our shares or the ADSs.

Appreciation of the *real* against the U.S. dollar may lead to a deterioration of the country's current account and the balance of payments, as well as to a dampening of export-driven growth. Any such appreciation could reduce the competitiveness of Brazilian exports and adversely affect net sales and cash flows from exports. Devaluation of the

real relative to the U.S. dollar could create additional inflationary pressures in Brazil by increasing the price of imported products, which may result in the adoption of deflationary government policies. The sharp depreciation of the *real* in relation to the U.S. dollar may generate inflation and governmental measures to fight possible inflationary outbreaks, including the increase in interest rates, which reduces the purchasing power of consumers and raises the cost in the credit market. Devaluations of the *real* would reduce the U.S. dollar value of distributions and dividends on our common shares and ADSs and may also reduce the market value of such securities. Any such macroeconomic effects could adversely affect our net operating revenues and our overall financial performance.

We acquire equipment and handsets from global suppliers, the prices of which are denominated in U.S. dollars. Depreciation of the *real* against the U.S. dollar may result in a relative increase in the price of our equipment and handsets. Thus, we are exposed to foreign exchange risk arising from our need to make substantial dollar-denominated expenditures, particularly for imported components, equipment and handsets, that we have limited capacity to hedge. See “Item 5. Operating and Financial Review and Prospects.”

Most of our indebtedness is denominated in *reais* and subject to Brazilian floating interest rates or subject to currency swaps that are tied to Brazilian floating interest rates. Any increase in the CDI rate, the TJLP rate or the SELIC rate may have an adverse impact on our financial expenses and our results of operations. See “Item 11. Quantitative and Qualitative Disclosures About Market Risk.”

The effects of the weak domestic economy could reduce purchases of our products and services and adversely affect our results of operations, cash flows and financial condition.

Although the global economy recently has been showing signs of improvement, domestic economic conditions still have been slow to recover. The Brazilian economy has gone through a marked recession in recent years, partially due to the interventionist economic and monetary policies of the previous administration and the general global fall and the recovery is still dependable on the approval of fiscal and political reforms, in particular the public pension reform, and the policies of the newly elected president.

The economy’s performance directly impacts our results of operations as a result of certain of our assets and liabilities being subject to inflation adjustment, and if inflation rises, disposable income of families may decrease in real terms, leading to lack of purchasing power among our customer base. In response to such tighter credit, negative financial news or declines in income or asset values, consumers and businesses may postpone spending, which could have a material adverse effect on the demand for 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 growth targets.

We may be impacted by volatility in the global financial markets.

We are susceptible to swings in global economic conditions, typified most recently by difficult credit and liquidity conditions and disruptions leading to greater volatility, which is enhanced by rising tensions between the United States and other commercial partners, such as China. The global economy has largely recovered from the crisis of 2007, however markets remain subject to ongoing volatility factors including interest rate divergence, geopolitical events such as the consequences of having the United Kingdom exit the European Union, or Brexit, and global growth expectations, and there is no assurance that similar conditions will not arise again. In the long term, as a consequence, global investor confidence may remain low and credit may remain relatively lacking. Hence, additional volatility in the global financial markets may occur.

The result of the Brexit referendum held in June 2016 is expected to result in economic adjustments in the trade and investment relationships between the United Kingdom and the rest of Europe in the future. Significant uncertainty exists as of the date of this annual report both in terms of the timing and final outcome of Brexit (with multiple options still being possible, including a no-deal Brexit); such uncertainty could lead to volatility in the international financial markets and have a negative impact on investment, economic activity and employment in the United Kingdom, Europe and even internationally. The scenario will also depend on the possible additional legal complexities resulting from the final terms of Brexit, including those related to trade, tax and security, which could also be costly and potentially disruptive to business relationships, including ours and those of Telecom Italia, as well as its suppliers and customers. The European Parliamentary election scheduled to be held in May 2019 may also contribute to the political uncertainty as it may change European goals in the medium term as well as key positions of

critical European institutions in 2019 and the years to come.

Additional volatility in the global financial markets could have a material adverse effect on our ability to access capital and liquidity on acceptable financial terms, and consequently on our operations. Furthermore, an economic downturn could negatively affect the financial stability of our customers, which could result in a general reduction in business activity and a consequent loss of income for us.

Developments and the perception of risk in other countries may adversely affect the Brazilian economy and market price of Brazilian issuers' securities.

The market value of securities of Brazilian issuers is affected by economic and market conditions in other countries, including the United States, European countries, as well as in other Latin American and emerging market countries. Although economic conditions in Europe and the United States may differ significantly from economic conditions in Brazil, investors' reactions to developments in these other countries may have an adverse effect on the market value of securities of Brazilian issuers. Additionally, crises in other emerging market countries may diminish investor interest in securities of Brazilian issuers, including our securities. This could adversely affect the market price of our securities, restrict our access to capital markets and compromise our ability to finance our operations in the future on favorable terms, or at all.

In the recent past, there was an increase in volatility in all Brazilian markets due to, among other factors, uncertainties about how monetary policy adjustments in the United States would affect the international financial markets, the increasing risk aversion to emerging market countries, and uncertainties regarding Brazilian macroeconomic and political conditions. These uncertainties adversely affected us and the market value of our securities.

In addition, we continue to be exposed to disruptions and volatility in the global financial markets because of their effects on the financial and economic environment, particularly in Brazil, such as a slowdown in the economy, an increase in the unemployment rate, a decrease in the purchasing power of consumers and the lack of credit availability.

Disruption or volatility in the global financial markets could further increase negative effects on the financial and economic environment in Brazil, which could have a material adverse effect on our business, results of operations and financial condition.

Risks Relating to Our Common Shares and the ADSs

Our controlling shareholder has power over the direction of our business.

Telecom Italia, through its ownership of TIM Brasil Serviços e Participações S.A., or TIM Brasil, our controlling shareholder, has the ability to determine actions that require shareholder approval, including the election of a majority of our directors and, subject to Brazilian law, the payment of dividends and other distributions. Telecom Italia's single largest shareholder is Vivendi, which is able to exercise significant influence over Telecom Italia. Telecom Italia may pursue acquisitions, asset sales, joint ventures or financing arrangements or may pursue other objectives that conflict with the interests of other shareholders and which could adversely affect our business, financial condition and results of operations.

Holders of our ADSs are not entitled to attend shareholders' meetings and may only vote through the depositary.

Under Brazilian law, only shareholders registered as such in our corporate books may attend shareholders' meetings. All common shares underlying our ADSs are registered in the name of the depositary. A holder of ADSs, accordingly, is not entitled to attend shareholders' meetings. Holders of our ADSs may exercise their limited voting rights with respect to our common shares represented by the ADSs only in accordance with the deposit agreement relating to the ADSs. There are practical limitations upon the ability of ADS holders to exercise their voting rights due to the additional steps involved in communicating with ADS holders. For example, we are required to publish a notice of our shareholders' general meetings in certain newspapers in Brazil. Holders of our shares can exercise their right to vote at a shareholders' general meeting by attending the meeting in person or voting by proxy. By contrast, holders of our ADSs will receive notice of a shareholders' general meeting by mail from the ADR depositary following our notice to

the ADR depositary requesting the ADR depositary to do so. To exercise their voting rights, ADS holders must instruct the ADR depositary on a timely basis. This voting process will take longer for ADS holders than for direct holders of our shares.

We cannot assure you that holders will receive the voting materials in time to ensure that such holders can instruct the depositary to vote the shares underlying their respective ADSs. In addition, the depositary and its agents are not responsible for failing to carry out holder's voting instructions or for the manner of carrying out your voting instructions. This means that holders may not be able to exercise their right to vote and may have no recourse if our shares held by such holders are not voted as requested.

Holders of our ADSs or common shares in the United States may not be entitled to participate in future preemptive rights offerings.

Under Brazilian law, if we issue new shares for cash as part of a capital increase, we generally must grant our shareholders the right to purchase a sufficient number of shares to maintain their existing ownership percentage. Rights to purchase shares in these circumstances are known as preemptive rights. We may not legally allow holders of our ADSs or common shares in the United States to exercise any preemptive rights in any future capital increase unless we file a registration statement with the SEC with respect to that future issuance of shares or the offering qualifies for an exemption from the registration requirements of the Securities Act. At the time of any future capital increase, we will evaluate the costs and potential liabilities associated with filing a registration statement with the SEC and any other factors that we consider important to determine whether to file such a registration statement. We cannot assure holders of our ADSs or common shares in the United States that we will file a registration statement with the SEC to allow them to participate in a preemptive rights offering. As a result, the equity interest of those holders in us may be diluted proportionately.

Cash dividends, interest on shareholders' equity and other cash distributions, as well as judgments seeking to enforce our obligations in respect of our shares or ADSs in Brazil will be payable only in reais.

We pay any cash dividends, interest on shareholders' equity and any other cash distributions with respect to our common shares in reais. Accordingly, exchange rate fluctuations affect the U.S. dollar amounts received by the holders of ADSs on conversion by the depositary of dividends and other distributions in Brazilian currency on our common shares represented by ADSs. Fluctuations in the exchange rate between Brazilian currency and the U.S. dollar affects the U.S. dollar equivalent price of our common shares on the Brazilian stock exchanges. In addition, exchange rate fluctuations may also affect our dollar equivalent results of operations. See "Item 5. Operating and Financial Review and Prospects."

If proceedings are brought in the courts of Brazil seeking to enforce our obligations with respect to our shares or ADSs, we will not be required to discharge our obligations in a currency other than *reais*. Under Brazilian exchange control limitations, an obligation in Brazil to pay amounts denominated in a currency other than *reais* may only be satisfied in Brazilian currency at the exchange rate, as determined by the Central Bank, in effect on the date the judgment is obtained, and such amounts are then adjusted to reflect exchange rate variations through the effective payment date. The then prevailing exchange may not afford non-Brazilian investors with full compensation for any claim arising out of or related to our obligations under our shares or the ADSs. See "—A. Selected Financial Data—Exchange Rates" for information regarding exchange rates for the Brazilian *real*.

Holders of ADSs or common shares could be subject to Brazilian income tax on capital gains from sales of ADSs or common shares.

According to Article 26 of Law No. 10,833 of December 29, 2003, which came into force on February 1, 2004, capital gains realized on the disposition of assets located in Brazil by non-Brazilian residents, whether or not to other non-residents and whether made outside or within Brazil, are subject to taxation in Brazil. Since January 1, 2017, the rate of the income tax on capital gains accrued by non-Brazilian resident individuals may vary between 15% and 22.5% depending on the capital gain amount. Ultimately, a 25% rate may apply if the capital gain is realized by

investors located at Low or Nil Tax Jurisdictions (i.e., a country that does not impose any income tax or that imposes tax at a maximum rate of less than 20% or 17%, depending if the country is aligned with the international standards of fiscal transparency). Although we believe that the ADSs will not fall within the definition of assets located in Brazil for the purposes of Law No. 10,833/2003, considering its general and unclear scope and the absence of any judicial guidance in respect thereof, we are unable to predict whether such interpretation will ultimately prevail in the Brazilian courts. See “Item 10. Additional Information—E. Taxation—Brazilian Tax Considerations.”

Gains realized by non-Brazilian holders on dispositions of common shares in Brazil or in transactions with Brazilian residents may be exempt from Brazilian income tax, or taxed at a rate that may vary between 15% and 25%, depending on the circumstances. Gains realized through transactions on Brazilian stock exchanges are exempt from the Brazilian income tax, provided that the transactions are carried out in accordance with Resolution CMN 4,373 (that replaced Resolution CMN 2,689) and the foreign investor is not located in Low or Nil Tax Jurisdictions. Gains realized through transactions with Brazilian residents or not executed on the Brazilian stock exchanges are subject to tax at a rate (1) that may vary between 15% and 22.5% depending on the capital gain amount if the investors are located in regular taxation jurisdictions, or (2) of 25% if the capital gain is realized by investors located in Low or Nil Tax Jurisdictions.

Please refer to “Item 10. Additional Information—E. Taxation—Brazilian Tax Considerations—Taxation of Gains.”

An exchange of ADSs for common shares risks loss of certain foreign currency remittance and Brazilian tax advantages.

The ADSs benefit from the certificate of foreign capital registration, which permits J.P. Morgan Chase Bank, N.A., or J.P. Morgan, as depositary, to convert dividends and other distributions with respect to common shares into foreign currency, and to remit the proceeds abroad. Holders of ADSs who exchange their ADSs for common shares will then be entitled to rely on the depositary’s certificate of foreign capital registration for five business days from the date of exchange. Thereafter, they will not be able to remit non-Brazilian currency abroad unless they obtain their own certificate of foreign capital registration, or unless they qualify under Resolution CMN 4,373, which entitles certain investors to buy and sell shares on Brazilian stock exchanges without obtaining separate certificates of registration.

If holders of ADSs do not qualify under Resolution CMN 4,373, they will generally be subject to less favorable tax treatment on distributions with respect to our common shares. There can be no assurance that the depositary’s certificate of registration or any certificate of foreign capital registration obtained by holders of ADSs will not be affected by future legislative or regulatory changes, or that additional Brazilian law restrictions applicable to their investment in the ADSs may not be imposed in the future.

Brazilian law allows for the Brazilian government to impose temporary restrictions, whenever there is a significant imbalance in Brazil’s balance of payments or a significant possibility that such imbalance will exist, on the remittance to foreign investors of the proceeds of their investments in Brazil, as well as on the conversion of the *real* into foreign currencies. The Brazilian government may, in the future, restrict companies from paying amounts denominated in foreign currency or require that any such payment be made in *reais*.

If similar restrictions are introduced in the future, they would likely have an adverse effect on the market price of our shares and ADSs. Such restrictions could hinder or prevent the holders of our shares or the custodian of our shares in Brazil, J.P. Morgan, from remitting dividends abroad.

A more restrictive policy could also increase the cost of servicing, and thereby reduce our ability to pay, our foreign currency-denominated debt obligations and other liabilities. If we fail to make payments under any of these obligations, we will be in default under those obligations, which could reduce our liquidity as well as the market price of our common shares, shares and ADSs.

Item 4. Information on the Company

A. History and Development of the Company

Basic Information

TIM Participações S.A. is a publicly held company (*sociedade anônima*) organized under the laws of the Federative Republic of Brazil. The Company was incorporated in the Federative Republic of Brazil for an indefinite period on May 22, 1998 under the name Tele Celular Sul Participações S.A., which was later changed to TIM Participações S.A. on August 30, 2004.

Our headquarters are located at João Cabral de Melo Neto Avenue, 850 – North Tower – 12th floor, 22775-055 Rio de Janeiro, Brazil and our telephone number is +55 (21) 4109-4167.

Our agent for service of process in the United States is Puglisi & Associates located at 850 Library Avenue, Suite 204, Newark, Delaware 19711.

The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at <http://sec.gov>. Our web site address is <http://www.tim.com.br>. Information contained on, or that can be accessed through, our website does not constitute a part of this Annual Report.

Historical Background

In July 1998, as part of the privatization of Telebrás, the Brazilian state-owned telecommunications monopoly, the Federal Government sold substantially all its shares of the 12 holding companies into which Telebrás had initially been broken up, including its shares of Tele Sudeste Celular Participações S.A., or TSU, and Tele Nordeste Celular Participações S.A., or TND. Following a series of acquisitions, corporate reorganizations and corporate name changes, TSU and TND merged to form TIM Participações in 2004.

We continued to expand and restructure our operations through a series of corporate reorganizations, mergers, acquisitions and name changes, and we are currently held, directly and indirectly, by Telecom Italia (which began operating in Brazil in 1998 as Telecom Italia Mobile) through its wholly owned subsidiary, TIM Brasil, formed in 2002 as the holding company of Telecom Italia's operating companies in Brazil. In turn, the single largest shareholder of Telecom Italia is Vivendi, which is able to exercise significant influence over Telecom Italia. See “—C. Organizational Structure” for a description of our current corporate structure and Exhibit 8.1 attached hereto for a list of our significant subsidiaries as of the date of this annual report.

In 2009, the acquisition of Holdco Participações Ltda., or Holdco, holder at the time of 100% of Intelig's capital, was approved and Intelig became a wholly owned subsidiary of TIM after this transaction. Our acquisition of Intelig (known since September 2017 as TIM S.A.) brought material advantages through significant synergies with its network, such as its metropolitan optimal fiber network and its large backbone that allowed us to accelerate the development of our 3G network and generate significant operational cost savings.

In 2011, our then wholly owned subsidiary TIM Celular (merged into TIM S.A. as a result of the Reorganization) entered into an agreement with Companhia Brasileira de Energia and AES Elpa (the AES Group in Brazil) for the purchase of all of AES Elpa's equity interests in Eletropaulo Telecomunicações and 98.3% of the interest of AES RJ, or the AES Atimus Acquisition. In connection with the acquisition, Eletropaulo Telecomunicações changed its corporate name to TIM Fiber SP Ltda., or TIM Fiber SP, and AES RJ changed its corporate name to TIM Fiber RJ S.A., or TIM Fiber RJ, and we call this business, collectively, TIM Fiber. In accordance with the reorganization of TIM Fiber, TIM Fiber RJ and TIM Fiber SP were merged into TIM Celular in 2012, which owns and operates an extensive fiber optic network in metropolitan São Paulo and Rio de Janeiro (and which, as discussed below, itself was merged into TIM S.A. in October 2018 as a result of the Reorganization). The purpose of this reorganization was to simplify our organizational structure and improve the administrative, operational and financial efficiency of the companies controlled by us.

Our shareholders approved our adherence to the *Novo Mercado* rules and the transfer of trading of the shares issued by us to the *Novo Mercado* segment of the *B3 S.A. – Brasil, Bolsa, Balcão*, or the B3, in 2011. In order to join the *Novo Mercado*, we are required to comply with heightened requirements relating to corporate governance and the disclosure of information to the market and we are not permitted to issue preferred shares, participation bonuses or

any kind of shares with restricted voting rights. From August 3, 2011, our preferred shares ceased to trade and we only had common shares traded on the *Novo Mercado* listing segment of the B3 by using the code “TIMP3,” and as from August 5, 2011, our ADSs representing preferred shares ceased to trade on the NYSE and our ADSs representing five common shares instead of ten preferred shares commenced trading on the NYSE. See “Item 9. The Offer and Listing—A. Offer and Listing Details.”

On July 25, 2017, the Company's Board of Directors approved the corporate reorganization, or the Reorganization, of its subsidiaries TIM Celular and Intelig. On September 6, 2017, as the first phase of the Reorganization, Intelig altered its articles of association to change the company from a limited liability company to an unlisted limited liability corporation, and to change its corporate name to TIM S.A.

As will be discussed in more detail below (see “—2018 Important Events”), in October 2018, the reorganization resulted in the merger of TIM Celular into TIM S.A. This merger achieved its objective of capturing operational and financial synergies, through the implementation of a more efficient operational structure, as well as accounting and internal control systems.

In 2013, Instituto TIM was founded with the mission to create and strengthen resources and strategies for the democratization of science, technology and innovation that promote human development in Brazil. In order to accomplish this mission, the Institute works in four pillars: Education, Inclusion, Technological Applications and Work, encouraging the democratization of free technological solutions and the creation of innovative approaches to the teaching of science and mathematics in Brazil.

In 2018, Instituto TIM was acknowledged by the Ministry of Justice in Brazil as a qualified Civil Society Organization of Public Interest, or OSCIP, which reinforced the commitment to transparency in the activities of the Institute.

This achievement also brings more credibility and confidence to expand the network of partners and institutions that wish to take part in the projects supported by the TIM Institute.

2018 Important Events

Corporate Reorganization

As mentioned previously, the Company's Board of Directors approved on July 25, 2017 the continuation of a corporate reorganization of its significant subsidiaries through the Reorganization, under which TIM Celular would be merged into Intelig (which had its corporate name changed to TIM S.A. in September 2017). The objective of the Reorganization was to capture operational and financial synergies, through the implementation of a more efficient process structure, as well as accounting and internal control systems.

The merger of TIM Celular into TIM S.A. took place on October 31, 2018, transferring all of TIM Celular's operations to TIM S.A., and with TIM S.A. succeeding to all of TIM Celular's assets, rights and liabilities. This final step of the Reorganization resulted in efficiencies including: (i) tax efficiencies related to the termination of intercompany transactions; (ii) the creation of one company with combined services (fixed and mobile services) potentially resulting in a more efficient and swift response to the market's needs, through the development of new services and integrated offers, and enabling a better strategic positioning and competitiveness as well as a better customer experience; (iii) optimization of resources and systems; and (iv) the recording by the Company of an approximately R\$952 million tax credit. The minutes of the Reorganization were filed with and approved by the Board of Trade of the State of São Paulo (*Junta Comercial do Estado de São Paulo*), or JUCESP, in December, 2018.

Interest on Equity

Since 2017, the Company has made payments of Interest on Equity to its subsidiaries and their respective shareholders. Interest on Equity is a commonly used alternative form of distribution (other than or as a complement of dividends) that allows the Company and/or its subsidiaries to take advantage of favorable tax impacts, since Interest on Equity is considered a deductible expense for the purpose of calculating Corporate Income Tax and Social

Contribution (for additional detail, see “Item 4. Information on the Company—B. Business Overview—Taxes on Telecommunications Goods and Services”).

The Company made a distribution of R\$850 million throughout the year ended December 31, 2018 in anticipation of the year's results. A total of R\$470 million from the total distributed was paid in 2018 and the other R\$380 million was paid in January 2019.

Exclusion of ICMS of PIS and COFINS calculation basis

As mentioned in 2017, the STF handed down a decision confirming that it is unconstitutional to include ICMS in the calculation of PIS and COFINS bases.

The Company has three different lawsuits related to this issue. In November 2018, as a result of the confirmation of the STF decision in one of these lawsuits (in respect of TIM Nordeste, ultimately merged into TIM S.A.), the Company recorded an amount of R\$353 million.

Capital Expenditures

Capital expenditures totaled R\$3,977 million in 2018, down 4.1% as compared to 2017, as found in the Industrial Plan 2018-2020. This decrease was due to efficiency on investments (more coverage, installing more equipment and fiber, yet using fewer resources due to better negotiated conditions). Approximately 87% of capital expenditures was dedicated to infrastructure, mainly transportation network projects, 4G technology and information technology. For a detailed breakdown of our capital expenditures in 2016, 2017, 2018 and currently in progress, as well as the total amount each year and method of financing the same, see "Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources—Uses of Funds—Material Capital Expenditures" and "—Sources of Funds."

On February 21, 2019, TIM released its Industrial Plan for 2019 – 2021 that seeks to solidify its leadership in ultrabroadband networks and digitalize its customers' experience to become the best telecommunications services provider in Brazil and consistently continue to improve its financial results in terms of profitability and cash generation. The trajectory to achieve these goals is based on: (i) improvement in mobile and residential broadband revenues, (ii) traditional efficiency approach and digitalization initiatives and (iii) optimization of tax rates, debt and dividends to improve cash generation with the approach "more with less." The capital expenditures expected to support the Industrial Plan for 2019 – 2021 is approximately R\$12.5 billion for that three-year period.

Recent Developments

On December 19, 2019, TIM S.A. approved the issuance of R\$1.0 billion in debentures pursuant to CVM Instruction No. 476, of January 16, 2009, which was disbursed in January 2019. The net proceeds from such issuance are expected to be used for working capital.

On March 20, 2019, we entered into, but have not received any disbursements of, a R\$390 million credit agreement with Agência Especial de Financiamento Industrial S.A. – FINAME for purposes of the acquisition of new machines, equipment, industrial systems, components and automation and computing goods of national manufacture. This FINAME facility replaced one of the sub-credits of a BNDES financing we entered into during 2018.

On March 28, 2019, our shareholders' meeting approved, for the period of 2019 to 2021, the new members of the Board of Directors of the Company and, for the period of 2019 to 2020, the members of the Fiscal Council of the Company.

On April 3, 2019, the Company's Board of Directors named Mr. Pietro Labriola as the new Chief Executive Officer of TIM Participações S.A., a position which he will hold alongside his role as board member of the Company. Mr. Labriola was elected in substitution of Mr. Sami Foguel, who served as the Company's Chief Executive Officer from

July 23, 2018 to April 2, 2019.

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B. Business Overview**Market Characteristics**

The telecommunications sector in Brazil is marked by strong competition and by the effective regulation of the national telecommunications agency, ANATEL, whose mission is “to promote the development of the country’s telecommunications, in order to provide it with a modern and efficient telecommunications infrastructure, capable of providing the society with adequate, diversified and fair prices throughout the entire national territory.”

The gradual recovery of the Brazilian economy had a direct impact on the telecommunications market in 2018, which continued to experience a reduction in the mobile customer base. Such a reduction in customer base has been driven at least in part by the reduction of interconnection rates, eliminating the community effect between clients of the same mobile network operator, and consequently the common practice of multiple SIMs per person. The mobile market has also been characterized by the process of migration from prepaid to hybrid (Control plans) and postpaid plans. This movement can be seen as a result of the growing demand for access to data, driven by use of OTT solutions to communicate at no extra cost, and content services. At the same time, the operators sought to retain their customers with offers that are characterized by recurrent consumption and, consequently, of revenue, in line with the strategy of offering more for more.

In 2018, the sector also reflected the tendency toward increased data consumption, requiring operators to adapt their networks and face the challenge of delivering an increasingly robust infrastructure in an environment of greater rationality in investments. Additionally, the industry was marked by an increased integration of digital services into their portfolio in order to monetize their offerings.

Finally, the growing demand for fixed broadband and the strong migration to higher speed service offerings (especially for ultra-broadband, with speeds above 34Mbps) reflected the new perception of Internet access as an essential asset for the population.

Mobile Market Developments

The following table shows the data of Brazilian mobile market during the periods presented.

	2018	2017	2016
Brazilian wireless subscriber base (million) ⁽¹⁾	229.2	236.5	244.0
Prepaid lines (million)	129.5	148.5	164.7
Postpaid lines (million)	99.7	88.0	79.4
Estimated total penetration (%) ⁽²⁾	109.9	113.5	118.0

(1) Source: Anatel

(2) Based on information published by Anatel and IBGE/IPC Maps (December 2018).

Following the dynamic of last year, the downward trend of customer base reduction in 2018 continued to be driven by the “cleaning” actions in the prepaid segment where customers which previously held multiple SIM cards are discarding them and by the process of consolidation of multiple chips. According to Anatel, the Brazilian mobile market presented a contraction rate of 3.1%, compared to 2017. Although the prepaid customer base contracted by 12.8% over the course of 2018, it still continues to represent the market’s largest component, constituting 56.5% of total subscriber base as of December 31, 2018, as compared to 62.8% as of December 31, 2017. The significant reduction in the overall number of prepaid users is mainly due to acceleration in users consolidating multiple SIM cards to a

single one, high penetration of mobile service and the rapid substitution of voice for data usage, resulting in a decrease in the so-called “community effect,” where consumers value a telecommunications system more as more users adopt it. The postpaid segment, however, experienced an increase of 13.3% over 2017, as compared to 10.8% in the year before, driven by operators’ efforts to monetize their customer base, offering more data, content and digital services, and the migrations from prepaid to Control plans, and from entrance plans to postpaid.

Mobile Competitors

TIM is the brand name under which we market our mobile telecommunications services, offering GSM, 3G, and 4G technologies. Currently, our subsidiaries hold mobile licenses for each of the ten wireless areas of Brazil recognized by Anatel, making us a mobile operator in Brazil offering complete nationwide coverage. In two of our ten areas we are the Telebrás legacy provider. See “—A. History and Development of the Company—Historical Background.” Our network covers approximately 95% of the country’s population based on Anatel’s coverage criteria.

In addition to TIM, there are three other major participants in the Brazilian mobile market that offer nationwide coverage in all Anatel wireless areas: Vivo, Claro and Oi.

The Brazilian mobile telecommunications industry is highly competitive. Any adverse effects on our results and market share from competitive pressures will depend on a variety of factors that cannot be assessed with precision and that are beyond our control. Among such factors are our competitors’ size, experience, business strategies and capabilities, the prevailing market conditions and the applicable regulations.

Other Competition

We also compete with fixed line telephone service providers. The fixed line incumbent providers in Brazil (Oi, Vivo and Embratel Participações S.A. (owned by America Movil), as well as Algar Telecom, which is a regional incumbent) and some relevant players (GVT, acquired by Vivo, and Net Serviços de Comunicação S.A., owned by America Movil) offer packages of services including voice (both fixed line and mobile), broadband and cable TV services in a bundled offer. Fixed line providers are, however, required to offer their services to unaffiliated mobile providers on the same basis they are offered to affiliated mobile providers. Our acquisition of Intelig (now known as TIM S.A.) and AES Atimus (later TIM Fiber, which was merged into TIM Celular in 2012, and TIM Celular was merged into TIM S.A. in 2018) broadened our participation in the fixed telecommunication sector.

We compete in the corporate telephony business with Nextel, a former provider of digital trunking (based on push-to-talk technology which was discontinued during 2018), or SME, and currently a regular mobile provider, (SMP only), using 3G and 4G technology in some regions. Nextel became the fifth mobile telecommunications competitor, but its network deployment was focused mainly in the states of São Paulo and Rio de Janeiro. In 2014, Nextel also entered into a national roaming agreement with Vivo, whereby Nextel’s SMP customers can use Vivo’s 2G and 3G mobile network in regions where Nextel does not have coverage.

On February 9, 2015, Anatel approved, by means of Resolution No. 647/2015, the adjustment of SME licenses into PCS licenses. Anatel established that the public price corresponding to the net present value of adaptation deducted from the amounts already paid, updated and calculated for the remaining term of the rights of use of radio frequencies up to July 31, 2018, amounts to approximately R\$100 million.

On November 6, 2018, Anatel issued Resolution No. 703/2018, which established new maximum limits for the amount of spectrum bandwidth that a single telecommunications service provider of collective interest, as well as its affiliates, subsidiaries or controller company, when operating in the same municipality, may hold on a primary basis. This regulatory change increases the competitive environment of the sector and facilitates consolidation of operations among the main players in the market.

Our Business

We are a telecommunications company that offers mobile voice and data services, broadband Internet access, Value-Added Services, and other telecommunications services and products.

TIM is recognized for its strong brand and for its reputation as an innovative and disruptive company capable of setting new consumption standards for the market. Our proactive approach allows the Company to be in a leading position in the transformation of the telecommunications business model. The change in consumer profiles and the emergence of new technologies foster a rupture in the telecommunications industry based on the consumption of digital data, content and services.

The Company is characterized by its pioneering and innovative offerings, among a complete portfolio for individuals as well as corporate solutions for small, medium and large companies. Besides traditional voice and data services, TIM offers a fixed-line ultra-broadband service, TIM Live, WTTx technology through Ultrafibra service, and is starting to offer IoT solutions, with successful examples in agribusiness.

The Company also offers a variety of digital content and services in its portfolio of packages, increasing for its clients the day-to-day functionality of their mobile devices. The ability to manage a complete and varied portfolio gives TIM the possibility to offer customized packages to its customers and to propose convergent offers in certain regions.

In 2018, TIM maintained a position as a competitive player in the postpaid segment, with “TIM Black” tariff plans, providing a better service usage experience and continuously innovating offerings. TIM Black was innovative as the first postpaid plan to include unlimited calls to any operator, in addition to robust Internet and digital services packages, including video platforms and partnerships with OTTs. TIM also made innovations in its portfolio of Control and prepaid offerings. In the Control segment, which tends to be a gateway to postpaid plans, the Company was the first to offer a new tariff plan (“TIM Controle Redes Sociais” or “TIM Control Social Networks”) with unlimited access to social networks, unlimited calls to any operator, plus data and digital services packages. The Company continues to be a valued leader in the prepaid plan segment and to offer innovative and complete packages, aiming to engender loyalty among our customer base.

Other recent innovations include our implementation of the first Narrowband Internet of Things, or Nb-IoT network, in Santa Rita do Sapucaí (MG) and our introduction of “Taís” in our network operations center. Taís is a virtual assistant created to assist the field technician during the course of their verification and problem-solving activities in respect of the network infrastructure when they are working to reestablish mobile and fixed network service.

TIM seeks to follow the desire of its consumers, considering them at the center of the Company’s decision making, based on: (i) innovation, which is in the DNA of the Company and will continue as a priority, with new plans, offers, partnerships and technologies; (ii) quality, which is the basis for acquiring the customer’s loyalty and for the expansion of its life cycle; and in the (iii) user experience, which is the strategic pillar of convergence of all others, establishing a new relationship with customers and acting in a way that everyone receives the best experience, great services and a transparent relationship with the Company.

Competitive Strengths

We believe that our robust network infrastructure, our innovative approach, our brand recognition and our widespread sales network, position us well to capitalize on opportunities in the telecommunications industry in Brazil and meet the constantly changing demands of the mobile telecommunications market. We believe that our main strengths include:

High quality services

Since national coverage and quality had improved quite substantially over the last few years, Anatel also has shifted its focus. The prior focus was service quality from a broader, state-oriented perspective and now, Anatel is taking a local perspective, concentrating its efforts on smaller geographic areas like cities, especially those where service is still considered poor. In the final quarter of 2017, Anatel proposed a new quality regulation with such a city-based focus (RQUAL). RQUAL applies to all the telecommunication services (mobile, fixed, fixed broadband and payTV) on a municipal level with such a city-based focus and sets forth new obligations for service providers, such as a user compensation model and a mandatory ombudsman and grants customers additional rights including the customer’s possibility of terminating their service agreement without penalty in case of poor service quality. The public consultation No. 29/2017, which set forth a proposal for a new RQUAL Regulation was due in April 2018, with

participation of all telecommunication providers, and the new regulation is expected to be published in the first semester of 2019. Accordingly, TIM has also started tracking its quality indicators and focusing on service quality at the city level, in order to assure an even more rigorous review of the customer experience. Following the contribution period, TIM continues to monitor municipalities outside the Anatel threshold (“critical”) and has already started simulating the new indicators set forth in public consultation No. 29/2017 if adopted.

The results of this local focus are demonstrated in the solid improvements of Anatel's quality metrics over the last years. As a highlight, the Company has been able to maintain positive results in 3G/4G data-related indicators due to the rapid expansion of our coverage in 2018, in particular in 4G, where we are the leading telecommunications company by number of cities covered, according to the Teleco website (www.teleco.com.br). In 2018, TIM was the company with the lowest number of critical municipalities, according to data released by Anatel in the second and third quarters of 2018.

TIM also demonstrated a strong performance of its LTE technology in data usage, wide coverage and availability. The TIM 4G network received higher measurements, when viewed against other test of 4G networks, in the Brazilian market on the SpeedTest platform. These results are important given the strong demand by TIM customers for this technology in 2018. At the end of 2018, approximately 72% of TIM's data traffic was carried out by the 4G network.

Moreover, in a satisfaction survey conducted by Bridge Research, TIM achieved significant results in 2018. In December 2018, the Company ranked first in overall satisfaction for the postpaid segment and second in the Control segment. TIM had a similar outcome with respect to satisfaction with mobile Internet use, occupying the first place in pure postpaid and second in Control.

It is also worth mentioning that the Company continues to invest in digitization efforts in order to improve customer experience and boost process efficiencies. TIM believes that the digital transformation of its services must take place on several fronts, from the sale and activation of the line, to post-sale and so-called "self-caring" (a term used in the telecommunications market for digital service portals that allow customers to manage profiles and subscriptions), billing, collection and, finally, payment.

The Company has experienced strong results from such digitalization efforts. Customer service is one particular area in which digitalization – in particular our Mobile App and interactive voice response, or IVR, technology – has proven fundamental to improving the customer experience. In 2018, we increased by 26% the number of digital customer interactions. Additionally, the number of individual users of the "Meu TIM" application grew 72%, while IVR retention increased 3%. Also, digital sales in the postpaid segment increased by 28% in the year ended December 31, 2018 as compared to the year ended December 31, 2017, and by 32% in the prepaid segment, while recharging by digital means continues to become a more relevant sales channel, with a 5% increase in the year ended December 31, 2018 as compared to the year ended December 31, 2017.

We believe our ultra-broadband service is also viewed generally as a reference of quality in the sector, driven by the Company's commitment to the customer experience. This service quality of TIM Live has demonstrated itself to be excellent, recognized by Netflix and Estadão Newspaper. At Netflix, TIM Live led as Brazil's fastest provider speed in every month of 2018.

The Company also seeks a strong position in the high value customer market by offering a variety of plans bundling voice and data packages, as well digital Value-Added Services (music, e-reading, video streaming) in order to provide a premium customer experience.

We are also better able to provide high quality services due to our strong relationship with our suppliers. We operate a system for information technology vendor management in order to improve the commitment of our suppliers. As a result of this approach, we benefit from enhancements like (i) better accountability of end-to-end vendors on our business processes; (ii) better contractual conditions and savings due to the increase of volumes per vendor; (iii) vendor consolidation and specialization in specific platforms/processes, creating the opportunity for long-term investments in such areas; and (iv) active contribution to transformation and simplification.

These processes were organized and improved through detailed rules such as the Projects Review Board and Investments, and the Function Points Productivity Contractual Auditing. This allowed us to achieve an excellent level of information technology governance, exemplified by better business contribution of each investment due to shared objectives and goals. As a result, we improved our efficacy and efficiency.

Finally, we also continue to seek new internal data sources in order to better understand our users' perspective and needs, including collecting and analyzing information from applications and investing in the modernization of traditional quality-assessment tools.

The Company understands that the above statistics reflect its commitment to solid infrastructure and its focus on the customer experience. However, the Company recognizes that there are some statistics and/or quality measures that use different methodologies that could present diverse results from those that are mentioned above.

Open Innovation Program

TIM's Open Innovation Program has the objective to establish a network to exchange knowledge, best practices and business models within a collaborative group of enterprises, startups and academia in order to leverage the development of innovative products and services. The objective of the program is to focus on learning and exploring new technologies in partnership with complementary business partners, in order to create sustainable and responsible solutions. The network was established based on the concept of partnerships with startup hubs and/or co-working spaces, and is designed to bring together entrepreneurs, vendors, technology companies, providers and content developers, innovation centers and universities so that they can recognize in TIM a potential partner in the development of new products, services or business models based on technology. In 2018, TIM interacted with startups all over the country, to discuss opportunities in areas like big data and analytics, artificial intelligence, the "Internet of Things," or IoT, financial technology companies, or fintechs, agritechs, mobile video and digital transformation. This year was also focused on promoting the discussion and application of new technologies such as blockchain and investing in the development of the ecosystem of solutions for using Nb-IoT technology in smart cities (urban areas that uses different types of IoT sensors to collect data and then use such data to manage assets and resources efficiently) and the business of agricultural production, or agribusiness.

Strong brand associated with innovation.

In 2018, TIM maintained the institutional campaign slogan "Evoluir é fazer diferente" (to evolve is to do things differently). This slogan is emblematic of TIM's strategy of seeking to fulfill consumers' needs by understanding what they value and earn their trust based in three pillars: (i) innovation, which is already in the company's DNA and will continue as a priority, with new plans, offers, partnerships and technologies; (ii) quality, as TIM has worked to become a leader in 4G coverage and maintain strong investments in infrastructure to deliver the best to its customers and be prepared for the future; (iii) user experience, which, in addition to the two other pillars, is important to establish a new relationship with customers and act to give every client the best caring experience, great services and a transparent relationship with the company.

Advanced Technology and Innovation Center

In 2017, we set up TIM Lab, a multifunctional test bed environment for evaluation of innovative technologies, products and services, assessing their functional efficiency and performance requirements, and development of new models and solutions. This endeavor brings engineers, researchers and technicians together to ensure effective assessment, and serves as an open space for new opportunities, leading innovation for the Brazilian telecommunications market and acting as a national reference for R&D activities.

TIM Lab performs a strategic role in supporting service assessment and innovation activities. These projects support TIM's network evolution and tackle certain important business and market needs, including the evaluation of new generation networks, future Internet applications, projects with positive social and environmental impacts and open innovation initiatives.

In this sense, TIM has also joined the Telecom Infra Project, or TIP, an initiative founded by Facebook and other companies to create a new approach for building and deploying telecommunication network infrastructure, with TIM Lab as the first TIP Community Lab in Latin America. In addition, since 2017 TIM Lab has also participated as one of the GSMA Mobile IoT Open Labs since 2017, a community where companies developing solutions over cellular low power wide area, or LPWA, networks can work with experts on their projects.

Among the technologies assessed and approved at the TIM Lab environment are certain extremely important technologies to support the network evolution, including 700MHz LTE, IP multimedia networks (voice over LTE, video over LTE, WiFi calling services, completely laid out functional blocks, and enabled by an IP multimedia subsystem, or IMS, platform), Network Functions Virtualization, or NFV, 4G RAN sharing, Narrowband Internet of Things, or NB-IoT, Dense Wavelength Division Multiplexing, or DWDM, transport network and power saving features and solutions.

The only Brazilian telecommunications company listed on the Novo Mercado and member in various other company-ranking indices.

Since our listing on the *Novo Mercado* in July 2011, we are the only company in the Brazilian telecommunications sector listed on this segment of the B3. As part of our listing on the *Novo Mercado*, we are required to comply with heightened requirements relating to corporate governance and the disclosure of information to the market. As part of our strong commitment to these principles, we made our financial results meetings available by teleconference, smartphones and tablets, in addition to computers. We believe that the listing on the *Novo Mercado* provides greater liquidity and value for our shares and allows us greater access to international markets, promotes the strengthening of our corporate image and increases confidence in us, in addition to reaffirming the long-term commitment of the Telecom Italia Group in Brazil. We believe listing on the *Novo Mercado* also aligns the interests among our controlling and minority shareholders with respect to voting rights, tag along rights and dividend policy.

In addition, we belong to a select group of companies comprising the portfolio of the Corporate Governance Index and the B3 Tag Along Stock Index, comprised of companies that have committed to adopt better co-sale protection to minority shareholders, have actively traded in 30% of the trading sessions and do not constitute a penny stock. In 2018, we were listed for the eleventh consecutive year as part of the portfolio of the Corporate Sustainability Index of the B3, an index comprised of companies that have a strong commitment to sustainability and social responsibility. In January 2019, TIM was selected for the seventh year to join the portfolio of the Carbon Efficient Index (ICO2) of the B3, with the commitment to measure, disclose and monitor its greenhouse gas, or GHG, emissions. As part of its commitment to society in addressing climate change, TIM conducts periodic mapping of the sources of emissions in its activities. The Company is able to do so by preparing annually a greenhouse gas (GHG) inventory in accordance with the guidelines of the GHG Protocol (which sets the global standard for how to measure, manage, and report greenhouse gas emissions). In August 2018, we received for the sixth year the gold seal of Greenhouse Gas Protocol, the program of the FGV Center for Sustainability, which aims to foster corporate responsibility with respect to greenhouse gas emissions.

Highly qualified and experienced executives and controlling shareholder support.

We have a team of highly qualified executives, widely recognized in the industry and possessing extensive experience in telecommunications markets in Europe and emerging countries. Our executive compensation policy seeks to align the interests of our executives with those of our shareholders, through variable compensation plans and stock options that reward good performance and the accomplishment of certain goals, as well as provide for improved executive retention.

Our controlling shareholder's support in our operations is further demonstrated through the sharing of know-how and best practices and development of new solutions for networking, marketing and finance, which are rapidly rolled out under a "plug & play" strategy, under which network innovations may be developed by our parent company first in other regions and then implemented with us.

Strong financial position

With consistent financial results in recent years, including the highest EBITDA margin in the telecommunications sector in Brazil, according to our internal analysis, we believe that we have a strong cash flow, a solid financial position and a low relative debt to EBITDA ratio. In this scenario, we understand that we are in a strong position to take a significant role in potential future consolidations in the market and/or to have a competitive position in important frequency auctions in the years to come.

Our Strategy

The Company's strategy in 2018 was based on six foundational pillars: culture, digitalization, offer, infrastructure, efficiency and customer experience. These pillars aimed to redesign the customer experience and make TIM the best choice by value in the market, supported by its position as the leader in the mobile ultra-broadband and its array of innovative offers.

The goal of our culture pillar is to disseminate the feeling of ownership and responsibility among our employees, and is intended to be the basis for a deep cultural transformation within the Company. Based on the concept of accountability, TIM believes that its employees will be able to concentrate their creativity and energy in the search for new solutions, delivering positive results.

The digitalization pillar aims to accelerate the development and implementation of digital systems, enhancing customer experience and delivering significant operational and financial efficiencies. The migration to digital and flexible platforms follows the market trend of using the most sophisticated technologies, allowing for greater operational agility and efficiency.

The offer pillar proposes the selective development of innovative packages, according to the client's profile. Additionally, the Company intends to expand its fixed broadband offer through Fiber to the Home, or FTTH, and WTTx technologies, which will allow a selective approach with convergent offers in certain regions.

With the infrastructure pillar, the Company aims to expand the 4G coverage via the 700MHz spectrum, reinforcing its leadership in mobile ultra-broadband coverage and quality excellence. In parallel, the development of fiber networks aims to broaden the Company's fixed broadband coverage and maintain the quality level required by the customers, and is also one of the main focuses for capital expenditure investment by the Company.

The efficiency pillar reflects the broad and systemic goal of generating disruptive efficiencies in the telecommunications market both operationally and financially.

All five pillars mentioned above are directly related to our commitment to the customer experience, which is our sixth pillar. This is the main objective of the proposed structure in which the customer is the center of decision-making. These pillars form the basis of the strategies described below.

Protecting the value of our prepaid customer base and aiming at the growing postpaid segment, shifting focus from absolute market share to revenue share, and strengthening our existing customer base.

As mentioned above, the Brazilian mobile telecommunications market is facing an overall reduction in the number of prepaid customers, as users which previously held multiple SIM cards are consolidating to one single SIM card, the reduction of interconnection charges, which allow companies to offer plans with off-network calls at the same price of on-network calls and the increase of use of OTT solutions to make calls at no extra cost. In connection with this trend, our strategy is to be chosen as the single SIM provider for the prepaid consumer market by providing offers that are attractive and valuable to customers and maintaining our reputation for quality. For the prepaid consumer market, our key priority is to offer simplification to improve customer experience with continued evolution of digital channels, while for the postpaid consumer market, our plan is to grow based on a "Mobile Challenger" approach pushing migration from prepaid, leveraging the benefits of 4G coverage leadership and establishing a customer long-term relationship driven by loyalty initiatives. To support this strategy, we are also implementing new offers, new handset strategy and initiatives in our sales channel model, including a more efficient regional approach.

In the business to business market, we intend to offer a more complete portfolio, with a more end-to-end approach, revising the value proposition and increasing not only efficiency but also sales productivity. Our growth strategy is mainly focused on addressing the potential for mobile Internet in the Brazilian market, particularly increasing mobile Internet penetration and data traffic. We believe mobile operators are in a strong position to address the demand for broadband in Brazil, with the ability to provide flexible price plans (including the prepaid consumer market) affordable to the majority of the Brazilian population. The lack of fixed infrastructure is still an issue for accessibility to fixed broadband, especially in suburban areas, making mobile coverage more suitable for such customers without broadband access. In addition to providing affordability and coverage advantages, mobile operators appeal to the new cultural demand for Internet connectivity at all times and in all places.

In addition, our strategy also involves positioning TIM as a partner of our existing customer base, by increasing their loyalty by offering exclusive products to existing customers, focusing on Value-Added Services in our offers, and by differentiation in our products and services. Value-Added Services represent an important part of the TIM strategy, as it is already a relevant market and has high growth rates with the potential to increase revenue streams. Such services are generally launched through a partnership with an established OTT player. We believe the foregoing strategies will allow us to strengthen customer loyalty without requiring us to incur higher costs, as increased traffic within our own network does not significantly increase our operational costs. We are also investing in new channels, to bring new customers to the company and to enhance each customer's experience. We are constantly seeking new customers through new marketing efforts and promotional initiatives. Another important growth factor is expected to come from our digital strategy evolution, with an increased role in the machine-to-machine market, or M2M, and internet of things, or IoT, growing ecosystem, exploring new revenues opportunities including being a platform provider (analytics, big data, mobile advertising, etc.) and a content offer aggregation to support mobile and fixed service revenue growth. Capitalizing on fixed-mobile substitution in voice and traditional services.

We seek to capitalize on the existing opportunity of fixed-mobile substitution in voice and data traffic and encourage the use of mobile devices, rather than fixed lines, for long distance communication and Internet. We believe that the main advantage of our product offerings is that our users are able to use our growing mobile network.

In the voice market, this strategy has been successful in part due to the limited service offerings of other long distance carriers in Brazil and the acceleration of fixed-mobile substitution. We have become the market leader in the long distance telecommunications market based on our market share. Fixed-mobile substitution is still evident in Brazilian market, as fixed telephony operators have experienced a decline in revenues. Since we are primarily a mobile operator with robust network infrastructure, the impact of any reduction in the fixed telephony market does not have a material impact on our performance and we therefore encourage the acceleration of fixed-mobile substitution, which in turn increases demand for our services.

As already mentioned, TIM is also targeting the residential broadband market through its 4G mobile broadband network, using WTTx technology, connecting homes to the Internet by using a router that connects to our 4G mobile network. We believe such product can be suitable especially for areas with poor fixed broadband infrastructure as our 4G coverage is growing rapidly.

Providing Internet access to everyone.

We intend to provide universal Internet access to an increasing number of individuals, offering our prepaid and postpaid customers competitive data usage plans through wireless handsets or other data devices (e.g., tablets, wearables, etc.). Our focus on increased data usage among our customers is also influenced by our ability to effectively manage our handset and accessories sales, with a primary focus on smartphone models that provide for quality Internet access at a low cost. This approach has allowed us to offer our services at a highly competitive price, offer convenient payment methods, meet market demand and allow for opportunities for innovation. The result of this strategy can be seen in the increase in our number of data users and in smartphone penetration, especially in 4G. Leading mobile Internet growth in our sector is a key pillar of our strategy, since we see this as the most important market in terms of growth and size in the foreseeable future. Our marketing efforts have also been designed to stimulate Internet usage and leverage our 3G and 4G networks by providing for suitable and affordable postpaid and prepaid Internet plans.

Construction of a unique infrastructure network in the Brazilian market and improving our network

We are committed to developing a robust network infrastructure capable of serving our customer base and anticipating new trends and technologies in the industry. The development of this infrastructure requires both organic (planning

and infrastructure development projects for the existing network) and inorganic (acquisitions) investments. As part of our strategy to focus our investments in infrastructure, we acquired Intelig (now known as TIM S.A.) in December 2009, in order to establish our own fiber optic network and develop automation projects. We also acquired the company formerly known as AES Atimus (later TIM Fiber, which was merged into TIM Celular in 2012, and TIM Celular was merged into TIM S.A. in 2018) in 2011 to strengthen and expand our fiber optic network.

Besides improving our core infrastructure, TIM has been rolling out an aggressive plan for 4G coverage, which has placed TIM as the undisputed leader in 4G coverage in Brazil, achieving more than 3,000 cities with 4G technology in 2018, considerably ahead of its competitors. This positions TIM as having the best coverage and the best mobile broadband technology, creating the possibility of an improved market position, particularly for high-end customers. Moreover, TIM has also been investing in 3G technology, achieving more than 3,000 cities covered in 2018. In order to improve our network coverage in an efficient way, without raising investment levels, TIM has executed network sharing agreements during 2018 with other telecommunications providers.

Expansion into new businesses and continued strength in recently expanded sectors.

TIM Live offers high quality ultra-broadband, with high-speed data connection varying from 35 Mbps through 2 Gbps (2,000 Mbps) downstream and 500 Mbps upstream speeds, currently operating in more than 10 cities, including the country's biggest cities, Rio de Janeiro and São Paulo.

In 2018, we had a base of 390 thousand clients, covering 3 million addressable households in 163 neighborhoods in the cities mentioned above. We plan to continue expanding our coverage in Rio de Janeiro and São Paulo states throughout 2019 and accelerate our deployment of fiber (backbone, backhaul and FTTH) with FTTH offered in selected regions. Our success with TIM Live has resulted from a strategy of transparent communication and a commitment to deliver the services that the consumer actually purchased, which differentiates us from local market practice.

Sales and Marketing Strategy

Our recent sales and marketing strategy has been characterized by:

- a focus on improving our positioning towards high value consumers, by offering a variety of plans bundling voice and data packages, as well digital Value-Added Services (music, e-reading, video streaming). The approach for this segment is driven by the strategy of adding value for the customer base and providing users with a premium customer experience;
- strengthening of our strategy in respect of the migration of customers away from the prepaid segment, by focusing on recurrent offers instead of daily offers and therefore supporting increased spending;
- a continuous evolution of our postpaid plans, within which we are pursuing a number of strategies, including: (i) a review of our offers in order to stimulate the sales of postpaid plans, with discounts in services and handsets, according to the commitment of the customers; (ii) add value, including Value-Added Services as part of our plans, without extra charges; (iii) creating new markets for postpaid plans, according to our customers' usage profile; (iv) creating new opportunities for transitioning the higher spending prepaid and TIM Controle customers to postpaid; and (v) including unlimited voice calls at no extra costs in all postpaid plans and top Control plans. See “—Mobile Service Rates and Plans”;
- an effort to maintain the Company's position as an innovator by introducing within the TIM Black portfolio new video streaming partners, such as YouTube, allowing customers to consume double the Internet package in its base-level offer which provides for video streaming;
- a monetization process in respect of our post paid customer base, leveraging ARPU, via a “more for more” strategy and end-to-end product offerings which result in higher revenue generation;

- maintaining of TIM Beta offers in order to develop brand loyalty as well as profitability and improve customer satisfaction. New offers are charged per week or per month and deliver a higher data package for users who achieve high scores in the gamification, which consists of the use of games dynamics to give rewards to customers, and that is exclusive to Beta users; and

- a restructuring of our small and medium business segment, targeting the growth of the overall sales force in order to boost mobile sales. This strategy will continue in order to meet customer needs and achieve alignment with industry demands.

Mobile Service Rates and Plans

In Brazil, as in most of Latin America, mobile telecommunications service is offered on a “calling party pays” basis, under which the customer generally pays only for outgoing calls. Additional charges apply when a customer receives or places calls while outside the customer’s “registration area,” which are the areas into which we divide our coverage areas.

Under our current authorizations, we are allowed to set prices for our service plans, provided that such amounts do not exceed a specified inflation adjusted cap. Anatel must ratify our basic and other service plans, but its focus is on compliance with the relevant regulatory rules rather than the prices charged. See “—Regulation of the Brazilian Telecommunications Industry—Rate Regulation.” We charge different rates for our services, which vary according to the customer’s service plan. Per minute prices decrease as customers commit to purchasing more minutes per month. Prices can also vary depending on the type of call (for example, calls from other operators on fixed lines or calls outside the network for mobile calls) or the location of the parties on a call.

Anatel regulations require mobile telecommunications providers to offer service to all individuals regardless of income level. We recommend service plans that are suitable to each potential customer’s needs and credit history, such as our prepaid service plans described below. If a customer fails to make timely payment, services can be interrupted. See “—Billing and Collection.”

We offer mobile services under a variety of rate plans to meet the needs of different customer classification, including our corporate customers. The rate plans are either postpaid, where the customer is billed monthly for the previous month, or prepaid, where the customer pays in advance for a specified volume of use over a specified period.

Our postpaid plans include the following charges:

- monthly subscription charges, which usually include a bundle of minutes, data and digital contents, that are included in the monthly service charge;
- usage charges, for usage in excess of the specified number of minutes included in the monthly subscription charge; and
- additional charges, including charges for Value-Added Services and data services.

Certain plans include the cost of national roaming and long distance in the price per minute so that all calls within Brazil cost the same amount per minute. Some postpaid plans are designed for high- and moderate- usage subscribers, who are typically willing to pay higher monthly fees in exchange for minutes included in the monthly service charge while other plans are designed to satisfy the more limited needs of low-usage postpaid subscribers. We also offer customized services to our corporate clients, which may include local call rates between employees wherever located in Brazil.

We offer a single prepaid plan with promotional offerings, which does not include monthly charges. Prepaid customers can purchase a prepaid credits plan that may be used for calls, data and additional services, based on the specific customer’s needs. We have agreements with large national retail stores chains, in addition to partnerships with regional retail stores chains, to offer online recharge. Customers can also recharge straight from their mobile handsets

using credit cards.

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Consumer Plans

In 2018, we continued to improve our positioning towards high value consumers, offering a variety of plans bundling voice and data packages, as well digital Value-Added Services (music, e-reading, video streaming). The approach to this segment is driven by the strategy of adding value for the customer base and ensuring users a premium customer experience.

Within the consumer business, our main plans include:

Prepaid Plans

- *TIM Pré Infinity*: under this prepaid plan, the customer is charged per day of use, with daily prices for various services (R\$1.49 voice unlimited / R\$1.49 Data 100MB / plus unlimited SMS), per service (day of use) and no charge on any day when not used.
- *TIM PRE Smart*: these offerings launched in the first half of 2016, were remodeled during 2017 and now provide larger weekly data packages (1GB / 1.5GB), unlimited SMS (in both offerings), unlimited on-network calls plus 100 minutes for other carriers (in both offerings) and OTT services (WhatsApp included in the 1GB offering, WhatsApp and Deezer included in the 1.5GB offering). The customer is automatically charged on a weekly basis, as long as there is enough balance available. There is also a monthly offering with automatic charge that includes 1.5GB data package, unlimited SMS and 400 minutes for any carrier.
- *TIM Beta*: plan marketed to young customers, charged per day for voice (to TIM numbers), SMS and mobile Internet services or weekly and monthly service bundles. The plan works with a referral mechanism. A new member can join only if referred to by existing members.

Postpaid Plans

In the higher value postpaid segment, we have maintained our position in the market as an innovator and disruptor with our *TIM Black* plan, and have improved the portfolio by offering unlimited data for use of social networks and new video streaming OTT partners, such as YouTube, allowing customers to consume double the Internet package in its base-level offer which provides for video streaming.

TIM POS plans start at R\$89.99 (which requires credit card payment) for an entry level plan with unlimited off-network calls, 6GB Internet, plus a 6GB Internet package for video streaming with commercial partners, unlimited data for OTT applications such as WhatsApp, Waze, “Easy Taxi” and others. The main offer is set at R\$139.99 (which requires invoice payment and a 12-month loyalty contract) for unlimited off-network calls, 10GB Internet, plus a 10GB Internet package for video streaming with major commercial partners such as YouTube, and unlimited data for OTT applications such as WhatsApp, Waze, “Easy Taxi” and others.

Control Plans

Our Control plans are a hybrid between our prepaid and postpaid plans, with fixed price billed to the customer on a monthly basis, either via credit card or digital account. Once customers of Control plans have reached the limit of their data plan, the data transmission is no longer available and the user has two options: (i) to repurchase a data package or upgrade to higher tariff plan or (ii) to wait for the next data period to commence, which varies by plan, at which point his data availability and usage limit are renewed in full. Postpaid customers can also purchase a data package to navigate in full speed but the usage is not blocked when he reaches the limit of his data package.

TIM Controle plans start at R\$44.99 with unlimited on-network calls and 25 minutes of off-network local calls and 2.5GB Internet. The main offer in the *TIM Controle* portfolio (which has a commercial focus) is set at R\$59.99 with unlimited calls, 3.5GB Internet and unlimited data for OTT applications such as WhatsApp and others.

We are seeking to increase customer base loyalty within the *Controle* segment by offering discounts for a 12-month contract; this type of offer allows TIM to be more competitive while taking a selective and rational approach. In April 2018, TIM improved the main *TIM Controle* offer by introducing “mobility apps” such as Waze, “Easy Taxi”. We also offer an innovative unlimited data “plug in” at a price of R\$20,00 for use of social networks (Facebook, Twitter and Instagram), and give customers the opportunity to “try and buy” this social network plug in for three months. We launched a new higher tariff plan within *TIM Controle* set at R\$79.99 with unlimited access to social networks, 3,5GB Internet and unlimited calls in order to encourage customers to upgrade after the try and buy period.

Corporate Plans

In 2018, we continued to improve our positioning towards the large companies as potential clients, offering a variety of corporate solutions for mobile or fixed services (both voice and data), as well as Value-Added Services and mobile-to-mobile services. The approach for these top clients are driven by customized solutions and a premium customer service focus.

In the small and medium business, or SMB, segment, we have kept deals attractive to our target customers, with a simple mobile portfolio and competitive pricing. In line with this strategy, we have launched TIM Black Empresas with unlimited voice calls and a variety of data packages, consistent with its strategy of providing “lots of minutes and lots of Internet, across all operators and anywhere in Brazil.” Additionally, we have included relevant Value-Added Services in the main combo offers (such as cloud storage and backup, specialized magazines and financial guides service), building on customers experience.

Value-Added Services

We are constantly seeking to increase value to our customers through innovative offers and products, and 2018 was no exception. We offer, directly or through agreements entered into with third parties, Value-Added Services in varied categories, such as education, music, reading, videos and social networks. Our most relevant change regarding Value-Added Services in 2018 was the improvement of our portfolio through additional services provided by new strategic partners. For 2019, we intend to continue to implement this strategy in a wider array of products, to introduce new types of Value-Added Services into these bundles, and to launch a new strategy to sell stand-alone Value-Added Services offers which will focus on aligning clients with Value-Added Services offerings.

Financial and Other Services

In 2018, we continued to develop this business as well as the insurance services we relaunched in 2017 with a new portfolio of services, which allow us to take a broader approach to this market. For 2019, we intend to develop new partnerships with Brazilian fintechs in order to provide agility and innovation to our customers.

Digital Channels

In 2018, we focused our efforts in the evolution of digital channels (including public and logged web sites, self-caring applications and e-commerce portals) in order to deliver new services, provide better customer experience and operate with more efficiency. Digital channels usage volume has increased significantly in 2018, with more visits in the public website and increases in the total sales and users of the Meu TIM application as compared to 2017.

Customer Service

In order to serve our customer base, almost 60 million customers, we aligned the insourced/outsourced ratio of our internally managed customer service operations to our outsourced customer service operation to the best practices of Brazilian telecommunications business. We operate through 14 customer care centers, two of our own and twelve outsourced, comprising around 16,300 customer service representatives (of which 2,800 are the purpose of offering dedicated to provide the best options in terms of offers and services to our multi-customer base). Our high value customer service and core processes are maintained within our internal customer care centers.

As of December 31, 2018, we had more than 12.2 thousand points of sales through premium shops and dealers (exclusive or multi-brand) and consolidated partnerships with large retail chains. This figure includes 156 of our own stores. In addition to these retail stores, our customers have access to prepaid phone services through supermarkets,

newsstands, and other small retailers, totaling more than 310 thousand points of sale throughout Brazil.

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

Throughout 2018, an important aspect of our customer service was digital customer service such as our mobile application Meu TIM and the Company's website. The digital channels are also gaining relevance in customer self-caring, top up of prepaid customers and upselling of services. In addition to being a better customer experience due to the quick response it provides, digital channels also allow TIM to reduce costs such as customer service operations and sales commissions.

In 2018, TIM worked to keep its "Customer Experience" foundational pillar as a focus (see "—Our Strategy"), creating initiatives that sought to put the customer as the center of decision-making. The approach used to promote this cultural transformation was guided by the relationship between customer and employee.

The Company has evaluated and taken action to improve the experience and professional development of its employees, with educational projects to promote engagement and insight. These efforts strengthened the bonds between an employee's business functions and the products and services they deliver to the customer. The impact was noticeable in our Organizational Climate Survey: our "Quality and Customer Focus" satisfaction ranking increased by 3%, from 2017 to 2018. The Company is rated 3% higher than others telecommunications operators.

The business area responsible for supporting these initiatives was divided in three sections: Design, Execution and Monitoring.

The Design area created a policy with "Customer Experience" guidelines. This document defined expected behaviors and patterns in communication and interactions with customers, outlined a monitoring model, as well as refactored the products and services development cycles, to better cover all elements of Customer Experience.

The Execution area sought to solve legacy issues, with many of them concluded, which represented the efforts in the Customer Experience governance plan. These actions were grouped on four strategic pillars:

- *Customer Centric*: being customer oriented, understanding their needs, the relationship and the value proposition they expect when interacting with the Company;
- *User Experience*: understand the perceptions and reactions of our customers, including their emotions, beliefs, preferences, physical and psychological responses, as well their behaviors before, during and after they use our products, offers and services;
- *Customer Monitoring*: making use of tools and techniques such as big data and predictive analytics to extract value from customer information, and to identify opportunities in revenue increase, reduced costs and improved quality;
- *Crew Experience*: With the understanding that our employees are key to create great customer experiences, empower our employees so that it is clear we are a consumer oriented organization;

In addition, we continued to use the so-called "Net Promoter Score" as a fundamental key performance indicator to measure customer experience with our call center. There is an ongoing project to expand this survey to other of our customer service channels in 2018.

We have also sought to maximize customer satisfaction through improvements in our processes and systems, including customer journey mapping, where employees are invited to assume the customer perspective using empathy

maps and design thinking tools. The goal of using these methods is to reduce customer effort, increase customer success and to ensure positive emotions towards TIM.

We also enhanced our interactive voice response channels to include more customer oriented services.

We completed the migration of prepaid and postpaid consumer back office services (front end was implemented in 2015) to the Siebel customer relationship management, or CRM, platform. The migration to the Siebel system from legacy systems for corporate clients is ongoing.

Lines of Revenue

Our revenues from mobile and fixed services includes: (i) monthly subscription charges, (ii) network usage charges for local mobile calls, (iii) roaming fees, (iv) interconnection charges, (v) national and international long distance calls, (vi) Value-Added Services, and (vii) co-billing. Additionally, we have revenues from sales of products (mobile handsets and accessories).

Monthly Subscription Charges

We receive a monthly subscription fee under our postpaid mobile plans, which varies based on the usage limits under the relevant plan.

Network Usage Charges

We divide our coverage areas into certain areas defined as “home registration areas.” Calls within the same home registration area are considered local calls. Each of our customers is registered as a user of one of our home registration areas.

As determined by Anatel, our usage rate categories for local mobile services on a prepaid or postpaid basis are as follows:

- VC1. The VC1 rate is our base rate per minute and applies to mobile / fixed or mobile / mobile calls made by a customer located in the customer’s home registration area to a person registered in the same home registration area.
- AD. AD is a per-call surcharge applicable to all outgoing calls or incoming calls made or received by a customer while outside such customer’s home registration area.
- VU-M. Value of Use of Mobile Network (*Valor de Uso de Rede Móvel*), or VU-M, also known as an interconnection rate or mobile termination rate, is the fee another telecommunications service provider pays us for the use of our network by such provider’s customers, in this case for local calls. See “—Interconnection Charges”.

Usage charges are for minutes in excess of those included as part of the monthly subscription charge under the relevant postpaid plan.

Roaming Fees

We receive revenue pursuant to roaming agreements we have entered into with other mobile telecommunications service providers. When a call is made from within our coverage area by a client of another mobile service provider, that service provider is charged a roaming fee for the service used, be it voice, text messaging or data, at our applicable rates. Similarly, when one of our clients makes a mobile call when that customer is outside our coverage area using the network of another service provider, we must pay the charges associated with that call to the mobile service provider in whose coverage area the call originates at the applicable rate of such mobile service provider.

Automatic national roaming permits our customers to use their mobile telephones on the networks of other mobile service providers while traveling or “roaming” in the limited areas of Brazil not covered by our network, complementing

our current mobile coverage. Similarly, we provide mobile telecommunications service to customers of other mobile service providers when those customers place or receive calls while in our network. Mobile service providers which are party to roaming agreements must provide service to roaming customers on the same basis that such providers provide service to their own clients. All such providers carry out a monthly reconciliation of roaming charges. Our roaming agreements have a one-year term and automatically renew for additional one-year terms.

Interconnection Charges

We receive interconnection revenues in connection with any call originating from another service provider's network, mobile or fixed line, which is received by any mobile customer, of ours or of another provider's, while using our network. We charge the service provider from whose network the call originates an interconnection fee for every minute our network is used in connection with the call.

We have entered into interconnection agreements with most the telecommunications service providers operating in Brazil, which include provisions specifying the number of interconnection points, the method by which signals must be received and transmitted, and the costs and fees for interconnection services. The interconnection among the networks of providers of telecommunications services of collective interest is mandatory and the interconnection agreements must be submitted to Anatel for approval. Nevertheless, even in the absence of ratification by Anatel, the parties to these interconnection agreements are obligated to offer interconnection services to each other.

The interconnection fees we were permitted to charge other mobile telecommunications providers, and which other mobile telecommunications providers charge us, have in the past been adjusted by inflation. In 2004, Anatel issued regulation establishing that the agency would determine rules for the calculation of reference rates for interconnection fees based on a cost model. Transition rules were defined and applied until, in July, 2014, by means of Resolution No. 639/2014, Anatel effectively issued the rule for the definition of reference rates for entities with significant market power, based on a cost model, for VU-M, as well as maximum rates for the termination of calls on TU-RL. Since the issuance of Resolution No. 639/2014, interconnection fees have been decreasing based on a specific glide path. See “—Regulation of the Brazilian Telecommunications Industry—Interconnection Regulation.”

Long Distance

Telecommunications customers in Brazil are able to select long distance carriers on a per-call basis under the carrier selection, or the CSP program, introduced in July 2003, by punching in a two-digit code prior to dialing long distance. This regulation also increased the size of home registration areas, calls within which are local calls and, as a result, reduced the number of home registration areas.

For mobile customers, we offer long distance services throughout Brazil through our wholly owned subsidiary TIM S.A. (into which our then-subsiary TIM Celular was merged in 2018). This service allows our mobile customers the option of continuing to use our service for long distance calls, which we believe strengthens our respective relationship and loyalty, and enhances the perception of our brand as a comprehensive mobile telecommunications service. Mobile customers of other service providers can also choose to use our long distance service.

Under this structure, a customer is charged the VC1 rates directly by us only for calls made by and completed to a number registered within that customer's home registration area. Long distance calls, however, are charged to a customer by the chosen long distance carrier. Other long distance carriers, in turn, pay us a VU-M fee for any use of our network for a long distance call.

As determined by Anatel, our long distance usage rate categories are as follows:

- VC2. The VC2 rate applies to calls placed by a customer located in one of our home registration areas selecting us as the long distance carrier, on a per-call basis, to place a call to a person registered in another home registration area within the same wireless area recognized by Anatel (e.g., a subscriber registered in home registration area 11 calling another subscriber registered in home registration area 12 to 19);

- VC3. The VC3 rate applies to calls placed by a customer located in one of our home registration areas selecting us as the long distance carrier, on a per-call basis, to place a call to a person registered outside the same wireless area recognized by Anatel (e.g., a subscriber registered in home registration area 11 calling another subscriber registered in home registration area 21 to 99); and
- VU-M. VU-M is the fee another telecommunications service provider pays to us for the use of our network by such provider's customers, in this case for long distance calls. See "—Interconnection Charges."

Co-Billing Services

Co-billing occurs when we bill our customers on behalf of another long distance service provider for services rendered to our customer by that carrier. Beginning July 2003, we started providing co-billing services to other telecommunication service providers operating in Brazil. The rates of such services are negotiated under the supervision of Anatel.

Sales of Product

We offer a diverse portfolio of handset models from several manufacturers for sale through our dealer network, which includes our own stores, exclusive franchises and authorized dealers. We are focused on offering an array of handsets, including essential and smartphones devices with enhanced functionality for Value-Added Services, mainly 4G equipment that provides Dual SIM, NFC, WiFi, Internet, Bluetooth and camera functionalities, while practicing a policy of increasing 4G smartphone penetration, focusing on high quality 4G smartphones to enhance the customer experience. Our mobile handsets can be used in conjunction with either our prepaid or postpaid service plans. In 2019, TIM will further its focus on the postpaid segment, offering to these customers discounts on 4G smartphones. Currently, we believe that supplies of mobile handsets are sufficient to satisfy demand, but also plan to expand our mobile handset portfolio to new devices focused on the customer experience, such as routers, other web devices and accessories.

Billing and Collection

Our company-wide, integrated billing and collection systems are provided by a third-party vendor. These systems have four main functions: (i) customer registration, (ii) customer information management, (iii) accounts receivable management and (iv) billing and collection.

These billing systems give us significant flexibility in developing service plans and billing options.

Certain aspects of billing customers in Brazil are regulated by Anatel. For mobile and fixed telephones, currently if a customer's payment is more than 15 days overdue, we can suspend the customer's ability to make outgoing calls if preceded by a notification. If the payment is 45 days overdue, we can suspend the customer's ability to receive incoming calls, also if preceded by a notification. For residential broadband, currently if a customer's payment is more than 15 days overdue, we can reduce the speed of the customer's broadband access and if the payment is 45 days overdue, we can suspend the customer's broadband access. After 90 days from the customer's payment due date, we generally discontinue service entirely, with a notification to the customer. Discontinuation of service is sometimes delayed, however, between 120 and 180 days after the due date for valued customers. The rules of suspension and discontinuation of fixed and residential broadband service are the same as those applied for the mobile service.

In March 2014, Anatel approved a single regulation for the telecommunications sector, with general rules for customer service, billing, and service offers, which are applicable to fixed, mobile, broadband and cable TV customers.

In order to avoid delinquency and discontinuation of service, however, we have invested in CRM models to identify customers with a higher propensity to early delinquency, or when a postpaid customer does not pay the first or second invoice, and also reinforced credit history checks for our customers prior to service activation. Although we continue to have one of the lowest delinquency rates in the segment, we noticed an increase in bad debt as a consequence of the expansion of the postpaid base of customers and the challenging economic environment. Our Express Plan has also proved to be an important tool to prevent early delinquency, since the payments are made by credit card.

Pursuant to Anatel regulations, we and other telephone service providers periodically reconcile the interconnection and roaming charges owed among them and settle on a net basis. See “—Lines of Revenue—Interconnection Charges” and “—Lines of Revenue—Roaming Fees.” Currently, the roaming reconciliation process is largely managed by industry sponsored groups, while the interconnection reconciliation process is primarily managed directly by us.

Seasonality

We have experienced a trend of generating a significantly higher number of new clients and product sales in the fourth quarter of each year as compared to the other three fiscal quarters. A number of factors contribute to this trend, including the increased use of retail distribution in which sales volume increases significantly during the year-end holiday shopping season, the timing of new product and service announcements and introductions, and aggressive marketing and promotions in the fourth quarter of each year.

Regional Overview

We offer GSM telecommunications services with a national reach to 95% of the urban population, which is one of the most extensive GSM coverage areas in Brazil, with a presence in 3,473 municipalities. We have 3G and 4G coverage available in 3,272 cities to more than 93% of the urban population of Brazil.

The following table shows information regarding the Brazilian mobile telecommunications, at the dates indicated.

	As of or For the Year Ended December 31,		
	2018	2017	2016
Brazilian population (millions) ⁽¹⁾	208.5	207.7	206.1
Estimated total penetration (%) ⁽²⁾⁽³⁾	109.9	113.5	118.0
Brazilian wireless subscriber base (millions)	229.2	236.5	244.0
National percentage subscriber growth (%)	(3.1)	(3.1)	(5.3)

(1) According to the last information disclosed by IBGE (July 2018).

(2) Percentage of the total population of Brazil using mobile services, equating one mobile line to one subscriber (December 2018).

(3) Based on information published by Anatel and IBGE/IPC Maps (December 2018).

Our Network

Our wireless networks use 2G, 3G and 4G technologies and cover approximately 95% of the urban Brazilian population based on Anatel's coverage criteria. In order to move toward 4G services, in October 2012, we acquired additional bandwidth in the 2,530-2,540 MHz and 2,650-2,660 MHz sub-bands, with national coverage, and the 450 MHz band in Espírito Santo, Paraná, Rio de Janeiro and Santa Catarina states.

Between 2007 and 2014, we acquired new RF authorizations used for 3G and 4G mobile telephone services at the 2100 MHz, 2500 MHz and 700 MHz bands. In September 2014, we invested approximately R\$2.85 billion to acquire bandwidth in the 700 MHz range, aligned with our strategy of expanding our broadband and 4G service across Brazil. We began providing our services in the 700MHz range in 2016. See “—Regulation of the Brazilian Telecommunications Industry—Frequencies and Spectrum Background”. In December 2015, Anatel auctioned left over radio frequencies in the 1,800 MHz, 1,900 MHz and 2,500 MHz bands. We submitted bids for the left over lots of the 2,500 MHz band, in the 2,500-2,510 MHz and 2,620-2,630 MHz sub-bands – known as P-Band, which had originally been auctioned in 2012. This particular P-Band spectrum provides for 4G mobile services. We acquired the lots for Recife, in the state of Pernambuco (Region AR 81), and Curitiba, in the state of Paraná (Region AR 41), based on our bids which totaled R\$57.5 million. The corresponding authorization terms were signed in July 2016. During 2017, several municipalities throughout Brazil had their analog TV signals switched-off, freeing up the bandwidths in those regions for 4G mobile

services. In 2018, the analog TV switch-off schedule was completed in regions where it is necessary to clean up the 700 MHz spectrum for the LTE. Therefore, by September 2019, all municipalities will be able to receive TIM's expanded 4G coverage through the 700 MHz band. See “—Regulation of the Brazilian Telecommunications Industry—Authorizations and Concessions.” In connection with the conclusion of the Reorganization whereby TIM Celular S.A. was merged into TIM S.A., see “—Item 4. Information on the Company—History and Development of the Company—2018 Important Events—Corporate Reorganization”, TIM S.A. holds all of the authorizations previously issued in the name of other companies controlled, directly or indirectly, by TIM Participações.

RF authorizations are generally valid for a period of 15 years and renewable for 15 more, and our current authorizations will start expiring in September 2022 (for details on spectrum licenses and expiration dates see “—Regulation of the Brazilian Telecommunications Industry—Frequencies and Spectrum Background”). In the case of authorizations that cannot be renewed, current telecommunications law sets forth that the spectrum is returned to the Federal Government under Anatel’s management. This is why reviewing the General Telecommunications Law has meaningful impact for the sector, as the proposed updated law allows for subsequent and unlimited renewals of radio frequency authorizations of up to 20 years each, generating an environment possibly more conducive to long-term investments.

We consider the purchase of any frequency made available by Anatel for the provision of mobile services as a priority, since having available frequency is core to our business. In 2018, we made R\$4 billion in investments, of which 87% of our capital expenditures were in infrastructure, primarily in 4G and 3G deployment, expansion and capacity enhancement of our optical transport networks, quality maintenance and enabling of fiber-to-the-site and MBB programs.

These investments allowed us to reach, by the end of 2018, the milestone of 3,272 cities with 4G coverage, or 93% of the country’s urban population. We are thus the leader in 4G coverage in Brazil among mobile telecommunications providers, both by number of cities served and percentage of population covered.

Our wireless network has both centralized and distributed functions, and mainly includes transmission equipment, consisting primarily of 13 thousand BTS in our GSM network, 16 thousand NodeBs (which provide connection between mobile phones and the network) for the 3G layer and 28 thousand eNodeBs for 4G network as of December 2018, considering site-sharing, hardware equipment and software installation and upgrades. The network is connected primarily by IP radio links and/or optical fiber transmission systems distributed nationwide.

Throughout 2018, we also expanded the installation of “Biosites” across Brazil, a cellular antenna shaped like a lamp post and designed to accommodate 3G and/or 4G transmission equipment, illustrating our focus on seeking innovative infrastructure alternatives to improve the quality of and our customers’ satisfaction with our services. Each Biosite is a multifunctional device, allowing not only for the installation of new 3G and/or 4G stations, but also modernizing streetlights in cities and reducing visual clutter, since the cellular antennas and their necessary equipment are self-contained within the post itself, without the need for an external or auxiliary engineering structure. Following the development of our Biosites at the end of 2018, we have the highest capacity of Biosites among Brazilian telecommunications providers, which we expect will aid in significant growth in coming years.

Another priority is developing our national network. In December 2018, we continued to increase the quantity of sites connected by optical fiber, contributing to an increase in data carried on our network as compared to 2017. The results are consistent with Anatel’s network quality requirements, and with TIM retaining its solid performance in 2018. Since national coverage and quality of service has improved substantially over the last few years, Anatel has shifted its focus in recent years. Anatel is now concentrating its efforts on smaller geographic areas, particularly in those areas where service is still considered poor. Anatel’s prior focus was on service quality from a broader state-oriented perspective rather than this local perspective.

The AES Atimus Acquisition and consequent creation of TIM Fiber (which was merged into TIM Celular in 2012, and TIM Celular was merged into TIM S.A. in 2018) has improved our optical fiber (or fiber optic) network presence in the metropolitan regions of Rio de Janeiro, São Paulo, Salvador, Goiânia and Manaus. Our optical fiber network has capacity to offer high quality ultra-broadband service, available through our TIM Live service.

As of December 31, 2018, our optical fiber infrastructure is highlighted by the following characteristics:

- the presence of TIM Fiber (now TIM S.A.) services in 252 neighborhoods in the metropolitan regions of Rio de Janeiro, São Paulo, Salvador, Goiânia and Manaus with continued expansion in Rio de Janeiro and São Paulo, where our TIM Live service is available; and
- an extensive wide covered area network covering more than 4.5 million households by address and approximately 3.2 thousand multi-service access nodes or MSANs and 139 optical line terminations, or OLTs, which is a network element that provides connection with the core network.

Our switching exchanges and intelligent network platforms enable us to offer flexible, high quality voice service at extremely competitive prices. Our satellite network covers distant areas of the country and is being expanded and renewed to provide high private service.

As a general matter, telecommunications operators' networks have tended to be designed, deployed and managed according to a vertical architecture model referred to as "end-to-end," where the hardware and software are proprietary and dedicated to each network function. With the growing demand for differentiated services, the need for physical space, energy and speed have become critical and, consequently, companies' capital expenditure and operating costs have tended to increase.

Such network architecture based on monolithic network elements requires a long time for development and deployment, impacting directly the time-to-market for launching new products or services and, consequently, reducing the generation of new revenues.

The Network Functions Virtualization, or NFV, is the new architectural paradigm that aims to address the infrastructural network transformation as a key step in the evolution of the implementation of new systems and network infrastructure, as it adopts the concept of consolidating standardized commercial off-the-shelf hardware elements that are available in virtual environments for shared use across various applications, accelerating the ability to deliver services, reducing costs and improving customer satisfaction. TIM aims to capitalize on the proposed benefits from such technology.

TIM understands that the NFV and the sharing of resources and equipment is the way to establish an economically more efficient structure, by reducing investment and/or operational costs while also reducing the time-to-market for launching new offers (an increasingly relevant factor in a competitive scenario).

By the end of 2018, we have deployed ten new virtualized network datacenters located in Rio de Janeiro (2), São Paulo (2), Fortaleza, Salvador, Brasília, Belo Horizonte, Belém and Curitiba. Some of our core network functions are already running in a virtualized fashion through these network datacenters. The migration of additional network functions to a virtualized datacenter will be based on a roadmap of virtual network functions, or VNFs, respecting the maturity of each network function.

Based on the efficiency and on the robustness of the technologies used in the NFV and IP networks, in virtualizing its core network, TIM is also optimizing capital expenditures.

Our commitment to solid infrastructure and quality improvement allow the Company to develop projects such as: (i) unification of the functions of an Intelligent Network (IN), core signaling network and network data base through Unified Data Consolidation (UDC) and (ii) the evolution of security platforms such as Session Border Controller (SBC), that accomplishes IP interconnection in with other operators. We expect from these and other projects to be able to reduce our operating expenditures by decreasing leased lines and infrastructure sharing, simplifying maintenance processes and architecture/topology, increasing resilience even in conditions of disaster recovery and improving the customer experience by increasing the speed in which calls are set up and data is transmitted and improve the amount of time needed to make customers profiles available in our data base.

In 2011, TIM implemented a Policy and Charging Control, or PCC, platform in accordance with the standards of the 3rd Generation Partnership Project, or 3GPP. This PCC made it possible for us to develop a brand new means to control fair use, as we are now able to reduce a given subscriber's speed, block usage and offer additional data packets to maintain maximum speeds after the subscriber's existing data packet is depleted. Since then, several innovative data offers have been launched that promote the usage of data, social media and streaming. This PCC platform is now evolving to a NFV model, which brings modernization and high scalability to support the increasing demand of

mobile data and reduces the time-to-market when launching new data offers.

In 2014, TIM started to change our Mobile Packet Core platform to a Unified Packet Core based on the most advanced 3GPP Evolved Packet Core standards, providing a coordinated seamless mobility management in a HetNet access environment (full multiple-access nodes for 2G/3G/4G/Femto/WiFi) in order to support the huge increase in data demand in the Brazilian telecommunications market, as discussed elsewhere throughout this annual report on Form 20-F. The Evolved Packet Core platform is also evolving to a NFV model, based on 3GPP's Control and User Plane Separation of EPC nodes. This enables flexible network deployment and operation, by distributed or centralized deployment and the independent scaling between control plane and user plane functions.

In 2017, TIM started to implement our Voice over LTE/4G, or VoLTE, platform following 3GPP standards, providing better voice quality and 4G service continuity, avoiding the need to resort to 2G/3G during voice calls. The VoLTE platform is also evolving to a NFV model, based on 3GPP's nodes.

Recently, TIM has implemented a new security system to access its new and legacy platforms, called "Secure Password." It uses a secure shell, or SSH, security protocol, monitors attempts of non-standard access and generates related warnings (IAM-Identity Access Management). This process involves password encryption and a logical safe that only grants recovery to authorized users while also granting and recording accesses through video and text devices. More specifically, it features: (i) password authentication with a maximum validity of 90 days; (ii) authorization through a login administration interface; and (iii) audit (logs) generated by the system, allowing the traceability of user actions from the beginning to the end of each operation. The system also sends logs to a centralized system as a historical database. Additionally, TIM has a plan to mitigate network risk in case of unexpected events on a macro scale that prioritizes the critical network infrastructure based on a risk map, or the Network Resilience Plan. The Network Resilience Plan allows the Company to focus on the main issues, and these in turn become the basis for crafting short-, medium- and long-term mitigation measures in order to enhance the robustness of the network, even in case of unexpected events.

Sources and Availability of Raw Materials

Our business and results of operations are not significantly affected by the availability and prices of raw materials.

Site-Sharing and Other Agreements

Site-Sharing Agreement

With the objective of avoiding unnecessary duplication of networks and infrastructure, Anatel allows telecommunications service providers to use other providers' networks (long distance, backhaul and spectrum frequencies, among others) as secondary support in providing telecommunications services, with a focus on reducing costs and increasing the penetration of mobile services in Brazil. Therefore, we have allowed other telecommunications service providers in our region to use our infrastructure, and we have used other providers' infrastructure, pursuant to site-sharing agreements with such operators.

Based on such Anatel policy, in November 2012, TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization) formalized with Oi an agreement for the reciprocal assignment of their LTE networks (4G technology) in certain cities, which was approved by Anatel and the Administrative Council for Economic Defense (*Conselho Administrativo de Defesa Econômica*), or CADE, which is the Brazilian antitrust agency and has the mission to ensure free competition in the market, not only by investigating and ultimately deciding on the competitive matter, but also by disseminating a free competition culture.

In January 2014, TIM Celular (now TIM S.A.) and Oi entered into a new agreement to negotiate the joint construction, implementation and reciprocal assignment of parts of their respective GSM (2G) and UMTS (3G) network infrastructures, which was also approved by Anatel and CADE.

In April 2014, TIM Celular (now TIM S.A.) and Oi entered into a new agreement to negotiate the joint construction, implementation and reciprocal assignment of parts of their respective GSM (2G) and UMTS (3G) network infrastructures in cities with less than 30.000 inhabitants, which was also approved by Anatel and CADE.

In June 2015, TIM Celular (now TIM S.A.), Oi and Vivo entered into an agreement for the reciprocal assignment of LTE network media (4G technology), similar to the agreement between TIM Celular (now TIM S.A.) and Oi in 2012,

but also covering frequencies sharing. As with the prior sharing agreements, Anatel and CADE approved the agreement between the parties.

Also in 2015, TIM Celular (now TIM S.A.), Vivo, Claro and Oi filed with CADE a Term of Commitment with the objective of negotiating the joint contracting of one or more companies to carry out the construction, installation and provision of infrastructure in indoor environments (such as shopping malls) in several locations in Brazil, which was approved without restriction by CADE.

In November 2015, TIM Celular (now TIM S.A.), Intelig (now TIM S.A.) and Vivo filed an agreement to share UMTS network (3G technology) under a Multiple Operation Core Network, or MOCN, RAN sharing model which includes frequency sharing in certain cities based on their rural coverage obligations, which was also approved without restrictions. Finally, in November 2018, CADE approved the expansion of the agreement between the parties to 570 more cities.

In March 2018, due to the mediation process between TIM and Oi, a new RAN sharing agreement was executed, which changed the sharing modality described in the 2012 agreement (technological evolution from the multi-operator radio access network, or MORAN, to the multi-operator core network, or MOCN) and included part of the 1,800 MHz radio frequency bands. CADE and Anatel approved the operation without any restrictions. Based on such Anatel policy, in November 2012, TIM Celular (now TIM S.A.) formalized with Oi an agreement for the reciprocal assignment of their LTE networks (4G technology) in certain cities, which was approved by Anatel and CADE. The agreement, which does not contemplate frequency sharing, remains valid between the parties.

Our Operational Contractual Obligations

For more information on our material contractual obligations, see “Item 10. Additional Information—C. Material Contracts.”

Interconnection and Other Agreements

We have entered into interconnection agreements with most of the telecommunications service providers operating in Brazil. The terms of our interconnection agreements include provisions specifying the number of interconnection points, the method by which signals must be received and transmitted, and the costs and fees for interconnection services. Interconnection agreements must be submitted for Anatel’s approval. Nevertheless, even in the absence of ratification by Anatel, the parties to these interconnection agreements are obligated to offer interconnection services to each other. See “—Interconnection Regulation.”

Roaming Agreements

We have entered into roaming agreements for automatic roaming services with other mobile operators outside our regions. Automatic roaming allows our customers to use their mobile telephones on the networks of other mobile operators while traveling abroad or out of TIM coverage areas in Brazil. Similarly, we provide mobile services for customers of other mobile operators when those customers place or receive calls while visiting Brazilian cities with TIM coverage. We provide services for the clients visiting our network on the same infra-structure basis provided to our own clients. All of the mobile operators party to these agreements must carry out a monthly reconciliation of roaming charges with its roaming partners.

Through TIM Brasil, we are a member of the Brazilian Association of Telecommunications Resources (*Associação Brasileira de Recursos em Telecomunicações*), or ABRT, a group comprised of all mobile and fixed telecommunications service providers operating in Brazil. This association is in charge of managing telecommunications projects in compliance with Anatel in order to support common interests of its members. Our GSM national and international roaming services are supported by individual agreements with our partners.

National Roaming Agreements

In accordance with Anatel requirements, we have entered into national roaming agreements with other Brazilian operators to guarantee a mobile service (voice and SMS) on Anatel's list of cities with less 30,000 inhabitants.

In 2017, Anatel required that TIM, Claro, Oi and Vivo guarantee the provision of mobile services (voice, SMS and data) in all cities with less than 30,000 inhabitants. The project started with a trial, which has already been implemented, of services in 35 cities (8 for TIM, 9 for Claro, 9 for Oi and 9 for Vivo); following the trial period in 2018, TIM has expanded its coverage to 613 new cities which means now its coverage encompasses a total of 2,519 cities.

International Roaming Agreements

We have international roaming agreements available in more than 211 different countries on approximately 643 networks. These agreements include at a minimum voice service, and may be enhanced based on the technology available on the visiting network and can include voice, SMS and data (2G, 3G and 4G). Our international roaming agreements have steadily expanded in recent years. By the end of 2018, we expanded our 4G data coverage to 18 new networks, meaning now we offer 4G roaming in more than 70 countries, covering the main travel destinations for Brazilians.

Fraud Detection and Prevention

“Subscription fraud,” which consists of using identification documents or data personal information of another individual to obtain mobile services, is the main fraud relating to mobile, fixed and long distance service. We are focused on implementing prevention measures in our points of sales to avoid such subscription fraud. Examples of prevention measures include digital authentication for our sales front-end system, a strong training program, maintaining a blacklist of offenders to prevent fraud, analysis of the documentation presented and monitoring and identification of point of sale. We also work to detect and prevent fraud by frequently improving and updating our traffic behavior monitoring and subscriber data.

Our security operations management develops programs and strategies to mitigate fraud risks through macro business processes such as:

Network: Actions aimed to combat theft, robbery or damage of equipment and network infrastructure by the application of physical and electronic protections, such as equipment tracking, installation of protective security equipment, virtual and physical surveillance and intelligence analysis.

Investigations of Specific Incidents: These anti-fraud efforts are focused on the reduction of illicit activities. The program consolidates and analyzes all the facts related to known incidents in order to identify circumstances in which the Company’s services may be being used to perpetuate noncompliance with laws, codes and other policies such as extortion, pedophilia, aggression, theft, drug trafficking and harassment.

Personal Security: These efforts focus on the combined use of organizational, technical and human resources aimed at preserving the physical, intellectual and emotional integrity of the human resources of the group, ensuring compliance with the precepts pointed out in the security operations mission and focused on the foreign public on a visit to Brazil.

Commercial Security: These efforts seek to mitigate the losses resulting from theft and robbery of smartphones, among them the deployment of safes in the stores for the storage of high value devices in all stores, prioritizing street-front stores.

Security in Logistics: These efforts are directed to combat loss due to theft or theft of merchandise whether in transportation or storage.

Security Compliance: Active monitoring of the emergence of new legislation related to customer data security and related internal compliance efforts.

Taxes on Telecommunications Goods and Services

The telecommunications goods and services offered are subject to a variety of federal, state and local taxes (in addition to taxes on income), the most significant of which are ICMS, ISS, COFINS, PIS, FUST, FUNTTEL, FISTEL, CONDECINE and Corporate Income Tax and Social Contribution on Net Income, which are described below.

- **ICMS.** The principal tax applicable to goods and telecommunication services is a state value-added tax, the *Imposto sobre Circulação de Mercadorias e Serviços*, or ICMS, which the Brazilian states levy at varying rates on certain revenues arising out of the sale of goods and services, including certain telecommunications services. The ICMS tax rate for domestic telecommunications services is levied at rates between 25% and 35%. The ICMS tax rate levied on the sale of mobile handsets and other products such as modem and SIM cards averages 17% or 20% throughout the Cellular Regions, with the exception of certain handsets whose manufacturers are granted certain local tax benefits, thereby reducing the rate to as low as 7%. In 2005, certain of the Brazilian states started to charge ICMS on the sale of mobile handsets under a “tax replacement” system, under which the taxpayer that manufactures the goods is required to anticipate and pay ICMS amounts that would otherwise only become due in later steps of the distribution chain.
- **ISS.** Since January 2018, the tax incidence over Value-Added Services has increased with the inclusion of those receivables within the ISS basis of calculation due to Law No. 157/2016, which is a municipality tax with rates varying from 2% to 5%.
- **COFINS.** *Contribuição Social para o Financiamento da Seguridade Social*, or COFINS, is a social contribution levied on gross revenues. Since 2000, companies began to pay COFINS tax on their bills at a rate of 3%. In December 2003, through Law No. 10,833, COFINS legislation was further amended, becoming a noncumulative tax, raising the rate to 7.6% for most transactions. However, telecommunications services revenues, among others, continued to be subject to a cumulative basis at a rate of 3%. In 2015, Decree No. 8,426 came into effect, which restored COFINS on financial revenues at a rate of 4%, except for some types of financial revenues (for example, revenues from foreign exchange variations of exportation of goods and services, revenues resulting from foreign exchange fluctuations of obligations undertaken by the company, including loans and financing and revenues related to hedging transactions on stock exchange values, and revenues from commodities and futures exchanges or over the counter transactions and related to the operational activities of the Company).
- **PIS.** *Programa de Integração Social*, or PIS, is another social contribution levied at the rate of 0.65%, on gross revenues from telecommunications service activities. In 2002, Law No. 10,637 was enacted, making such contribution non-cumulative and increasing the rate to 1.65% on gross revenues, except in connection with telecommunications services, for which the method continues on a cumulative basis at a rate of 0.65%. In 2015, Decree No. 8,426 came into effect, which restored PIS on financial revenues at a rate of 0.65%, except for some types of financial revenues (for example, revenues from foreign exchange variations of exportation of goods and services, revenues resulting from foreign exchange fluctuations of obligations undertaken by the company, including loans and financing and revenues related to hedging transactions on stock exchange values, and revenues from commodities and futures exchanges or over-the-counter transactions and related to the operational activities of the Company).
- **FUST.** In 2000, the Brazilian government created the *Fundo de Universalização dos Serviços de Telecomunicações*, or FUST, a fund that is supported by a tax applicable to all telecommunications services. The purpose of the FUST is to reimburse a portion of the costs incurred by telecommunications service providers to meet the universal service targets required by Anatel (such as targets for rural and impoverished areas, schools, libraries and hospitals), in case these costs are not entirely recovered through the collection of telecommunications service fees and charges. FUST tax is imposed at a rate of 1% on gross operating revenues, net of discounts, ICMS, PIS and COFINS, and its cost may not be passed on to clients. Telecommunication companies can draw from the FUST to meet the universal service targets required by Anatel.

In 2005, Anatel enacted Ordinance No. 7/05 requiring that FUST should be paid on revenues arising from interconnection charges since its effectiveness. A notice was issued deciding that we must adjust values on the FUST calculation basis in order to include interconnection revenues received from other telecommunications companies. A writ of mandamus was filed against Anatel to avoid the terms of Ordinance No. 7/05. The first level decision was

issued in our favor. Such decision was challenged by Anatel and the Appeal will be judged by second level.

- *FUNTTEL*. In 2000, the Brazilian government created the *Fundo para Desenvolvimento Tecnológico das Telecomunicações*, or FUNTTEL, a fund that is supported by a social contribution tax applicable to all telecommunications services. FUNTTEL is a fund managed by BNDES and FINEP, government research and development agencies. The purpose of FUNTTEL is to promote the development of telecommunications technology in Brazil and to improve competition in the industry by financing research and development in the area of telecommunications technology. FUNTTEL Tax is imposed at a rate of 0.5% on gross operating revenues, net of discount, ICMS, PIS and COFINS, and its cost may not be passed on to clients.

In 2013, Anatel enacted Resolution No. 95, which regulates FUNTTEL collection. As in the case of FUST, it requires that FUNTTEL be calculated based upon revenues arising from interconnection charges since its effectiveness. Sinditelebrasil, the Brazilian syndicate of telecom companies, filed a Writ of Mandamus against Anatel in order to compel Anatel not to apply Resolution No. 95/2013. An injunction was issued in our favor but the final decision has not been rendered yet.

- *FISTEL*. *Fundo de Fiscalização das Telecomunicações*, or FISTEL, is a fund supported by a tax applicable to telecommunications services, which was established in 1966 to provide financial resources to the Brazilian government for its regulation and inspection of the sector. FISTEL consists of two types of fees: (1) an installation inspection fee assessed on telecommunications stations upon the issuance of their authorization certificates, as well as every time a new mobile number is activated, and (2) an annual operations inspection fee that is based on the number of authorized stations in operation, as well as the total basis of mobile numbers at the end of the previous calendar year. The amount of the installation inspection fee is a fixed value, depending on the kind of equipment installed in the authorized telecommunication station. Effective in 2001, the installation and inspection fee is assessed based on net activations of mobile numbers (that is, the number of new mobile activations reduced by the number of cancelled subscriptions), as well as based on the net additions of radio base stations. The operations inspection fee equals 33% of the total amount of installation inspection fees that would have been paid with respect to existing equipment. The public funds raised from this installation fee are appropriated to either the Brazilian Communication Company, or EBC, or ANCINE, in order to benefit Brazilian cinema industry. Also, Anatel charges the installation inspection fee when there is an extension of the term of validity of the right to use radio frequencies associated with the operation of the personal mobile service. The Company understands that such collection is unjustified and is challenging this rate in court.

- *Corporate Income Tax and Social Contribution on Net Income*. Income tax expense is made up of two components, a corporate income tax, or IRPJ, on taxable income and a social contribution tax on net income, or CSLL. The corporate income tax is payable at the rate of 15% plus an additional rate of 10% (levied on the part of taxable profits that exceed R\$0.02 million per month or R\$0.24 million per year). The social contribution tax is currently assessed at a rate of 9% of adjusted net income.

In 2013, the Brazilian government enacted Provisional Measure No. 627/2013, in order to end the Transitional Tax Regime, or RTT. RTT was implemented in 2008 as a way to neutralize the tax impact caused by the adoption of IFRS accounting rules in lieu of Brazilian GAAP.

In 2014, Provisional Measure No. 627 was converted into Law No. 12,973, the main objective of which was to implement the new tax regime, adapted to the new accounting guidance provided by IFRS, ending the RTT. Given that the implementation required specific adjustments to promote the elimination of the effects of registration of the new accounting methods and criteria to the statutory books, some assets and liabilities now have different methods and accounting criteria from those previously adopted by the former accounting rule. Law No. 12,973 established as a condition for the accurate tax treatment of these differences to impact only at the time of the realization of these assets or liabilities the creation of subaccounts for individualized control. The treatment is the same in regard to present value adjustments and fair value adjustments.

The rules for deductibility of goodwill were maintained for transactions which occurred prior to the end of 2017. The tax treatment by TIM Celular (now TIM S.A.) of the goodwill arising from the purchase of the companies AES Atimus SP and RJ was not impacted by the new rules.

Regarding dividends, Law No. 12,973 ensured the full and unconditional exemption on payment or credit of profits or dividends earned between 2008 and 2013, previously paid or not. Uncertainty remained, however, about the exemption on profits and dividends generated in the calendar year 2014, if higher than the taxable income in the same period in the case of companies that do not opt for early adoption of the new post-RTT tax regime that year. According to the Federal tax authorities the exception is not applicable to the excess amount, or in other words, to the profits and dividends paid in excess of the taxable income.

Dividends are not subject to withholding income tax when paid. However, as the payment of dividends is not tax deductible for the company that is distributing them, there is an alternative regime for stockholder compensation called “interest on equity,” which allows companies to deduct any interest paid to stockholders from net profits for tax purposes.

These distributions may be paid in cash. The interest is calculated in accordance with daily pro rata variation of the Brazilian government’s long-term interest rate TJLP, as determined by the Central Bank from time to time, and cannot exceed the greater of: (1) 50% of the net income (before taxes and already considering the deduction of the own interest amount attributable to stockholders) related to the period in respect of which the payment is made; or (2) 50% of the sum retained profits and profits reserves as of the date of the beginning of the period in respect of which the payment is made.

Any payment of interest to stockholders is subject to withholding income tax at the rate of 15%, or 25% in the case of a stockholder who is domiciled in a Low or Nil Tax Jurisdiction. These payments may be qualified, at their net value, as part of any mandatory dividend. As described herein the Company and its subsidiaries paid interest on equity in 2018. Please refer to “Item 4. Information of the Company—2018 Important Events—Interest on Equity” for detailed information.

Losses carried forward are available for offset during any year up to 30.0% of annual taxable income. No time limit is currently imposed on the application of net operating losses on a given tax year to offset future taxable income within the same tax year, nevertheless there is no monetary restatement.

Companies are taxed based on their worldwide income rather than on income produced solely in Brazil. As a result, profits, capital gains and other income obtained abroad by Brazilian entities are added to their net profits for tax purposes. In addition, profits, capital gains and other income obtained by foreign branches or income obtained from subsidiaries or foreign corporations controlled by a Brazilian entity are computed in the calculation of an entity’s profits, in proportion to its participation in such foreign companies’ capital.

In the end of 2017, the Brazilian Federal Revenue Office, or RFB, issued Normative Instruction No. 1,771/2017 in order to determine the tax treatment due to the accounting CPC 47 – Customer Contract Revenue, which tax treatment went into effect in 2018.

Income tax and social contribution were regulated by Decree No. 3,000/1999 in addition to other federal laws and decrees. In December 2018, this decree was substituted by Decree No. 9.580, which consolidates the main provisions related to income tax and social contribution. As of the date hereof, no relevant impacts to the Company were identified with regard to such changes.

Regulation of the Brazilian Telecommunications Industry

General

The telecommunications sector is regulated by Anatel, which was established by law and is administratively independent and financially autonomous from the Ministry of Science, Technology, Innovation and Communication (*Ministério da Ciência, Tecnologia, Inovações e Comunicações*), or MCTIC. Anatel is responsible for promulgating standards related to telecommunications services and regulating the relationship between different operators, as set forth in the General Telecommunications Law and the *Regulamento da Agência Nacional de Telecomunicações*, or the Anatel Decree.

Despite liberalization, which occurred in 1997, the Brazilian telecommunications market still faces persistent dominant positions held by fixed incumbent operators. In particular, broadband access is currently offered by operators over their own infrastructure and the respective regulatory framework is not always based on effective implementation of the wholesale access obligations.

A presidential decree issued on June 30, 2011, established a bidding process for fourth generation RFs, an important landmark for the telecommunications sector. The bid occurred in 2012 and, in order to guarantee full rural service by 2018, Anatel linked the 4G blocks in the 2,500 MHz band to the 450MHz band in specific geographic regions of Brazil. As a result, the four winning operators of the 4G blocks in the 2,500 MHz band linked to the 450MHz band are subject to coverage commitments in rural areas. Such presidential decree also resulted in two new regulations to measure mobile and fixed broadband quality standards. The presidential decree also approved the PGMU, creating fixed line universal service obligations binding on the fixed telephony services (*Serviço Telefônico Móvel Comutado*), or STFC, concessionaires.

In October 2012, Anatel enacted the Regulation on Universal Obligations related to the fixed line universal service obligations (*Plano Geral de Metas de Universalização*), or PGMU, regulating backhauling, public pay phones and telephone services for low income families, among others. A new PGMU was published in December 2018, and included obligations to deploy 4G fixed wireless access in non-urban districts. In addition, there was a reduction in the obligation to maintain and deploy payphones.

In November 2012, Anatel enacted the General Plan for Competition Goals (*Plano Geral de Metas de Competição*), or PGMC 2012, whose goal is to encourage competition by creating interconnection obligations and the sharing of infrastructure already installed by other operators. PGMC 2012 was revised by Resolution No. 694/2018. Full adoption of these standards required new investments and has been under debate.

In March 2014, by means of Resolution No. 632/2014, Anatel approved the adoption of a single regulation for the telecommunications sector (*Regulamento Geral de Direitos do Consumidor de Serviços de Telecomunicações*), or RGC, with general rules for customer service, billing, and service offers, which are applicable to fixed, mobile, broadband and cable TV customers. In 2018, Anatel held a Subsidies Grant, which is an opinion-gathering tool similar to but at the preparation stage of a Public Consultation, aiming to improve the RGC in respect of the digitalization of processing and customer services, as well as billing and contracting services. A public consultation is expected for 2019.

In 2016, Anatel issued certain regulations which are particularly relevant to our operations, including: Resolution No. 663/2016, which modified rules of the MVNO Regulation; Resolution No. 667/2016, which approved the General Regulation of Accessibility in Telecommunications Services of collective interest; Resolution No. 668/2016, which modified the STFC Regulation; and Resolution No. 671/2016, which approved the Regulation on the Use of the Radio frequency Spectrum and modified the Regulation on the Collection of Public Price for the Right of Use of Radio frequencies and the Regulation on the Imposition of Administrative Sanctions.

Throughout 2018, MCTIC and Anatel issued other important public consultations as listed below:

MCTIC

(i) Public Consultation on a National Plan for Internet of Things, (ii) Public Consultation on a National Strategy for Digital Transformation, which has been memorialized in Decree No. 9,319/2018 which creates the National System for Digital Transformation and establishes the governance structure for the implementation of the Brazilian Strategy for Digital Transformation, or the E-Digital Decree, and (iii) a public consultation on a draft decree setting forth the public policies for the telecommunications sector as established in Decree No. 9,612/2018, or the Connectivity Plan Decree.

The E-Digital Decree sets out approximately 100 strategic actions aimed at increasing competition and online productivity levels in the country, as well as the increasing connectivity and digital inclusion levels of the Brazilian population as a whole. These actions cover strategic topics related to the digital economy, including infrastructure

connectivity, privacy and data protection, the Internet of Things and cybersecurity.

The Connectivity Plan Decree establishes a series of guidelines for the execution of terms of conduct adjustment, onerous granting of spectrum authorization and regulatory acts in general, which include: (i) expansion of high capacity telecommunications transport networks; (ii) increased coverage of mobile broadband access networks; and (iii) broadening the coverage of fixed broadband access network in areas with no Internet access offered through this type of infrastructure. It also establishes that the network resulting from the commitments will be subject to sharing since its entry into operation, except when there is appropriate competition in the respective relevant market.

The Connectivity Plan Decree repealed Decree No. 4,733/2003, which provided for public telecommunications policies; Decree No. 7,175/2010, which established the National Broadband Plan, or PNBL; and Decree No. 8,776/2016, which created the Brazil Intelligent Program, a new stage of expansion of the PNBL with actions to universalize Internet access and increase the average speed of fixed broadband in Brazil.

The three public initiatives described above and any upcoming or replacement initiatives aim not only to regulate new digital services and products, but also to increase mobile broadband connection all over the country, through incentives for investments in infrastructure, possible tax exemptions and benefits, and government and industry interoperability.

Anatel

In 2018, Anatel submitted 54 topics for Public Consultation and 12 to Subsidies Grants. The main topics were: (i) Public Consultation No. 6 – proposing new management regarding spectrum use management, including a resolution on spectrum usage limits; (ii) Public Consultation No. 20 – proposing PERT – Structural Plan for Telecommunications Network; (iii) Public Consultation No. 25 – proposing conditions for the usage of the 2.3 GHz band; (iv) Public Consultation No. 38 – proposing a new grant and licensing model; (v) Public Consultation No. 43 – proposing conditions for the usage of the 3.5 GHz band; (vi) Subsidies Grant for the new RGC; (vii) Subsidies Grant to establish proper regulation of IoT and M2M to establish a proper regulation; and (viii) Subsidies Grant for the auction process of the 2.3 GHz and 3.5 GHz bands.

Additionally, Anatel enacted several important regulations that will have a significant impact on our activities, particularly those summarized below:

- Resolution No. 693/2018: this Resolution approved the new General Interconnection Regulation, or RGI, which revokes the “General Interconnection Regulatory Framework” enforced by ANATEL in 2005. The new regulation maintains the obligation to publish a public interconnection offer highlighting both economic and technical conditions, such as the application of the “bill and keep” system for local fixed termination rates, i.e., operators will take rights of traffic generated on their networks, and no interconnection remuneration will be due for local calls between two different networks.
- Resolution No. 694/2018: this Resolution approved the New PGMC, updating the tools for market analysis and identification of operators with market power and imposition of *ex-ante* obligations. It also sets up two new markets: (i) interconnection for telephone traffic in fixed networks; and (ii) high capacity data transport. TIM Brasil has been identified as having SMP in the wholesale markets of mobile termination, national roaming, and high capacity data transport (in five municipalities). As from the New PGMC, alternative operators can’t apply asymmetrical interconnection rates exceeding up to 20% the one applied by the incumbents. As from 2016, the fixed interconnection rates have been following a cost-oriented approach.
- Resolution No. 695/2018: this Resolution approved the new Public Price for the Right to Use of Radio Frequencies, or PPDUR, which establishes a two calculation basis, one for renovation of radio frequencies and the other for license acquisition. The new formula also provides the possibility of a single or installment payment, provided that the number of annual installments does not exceed the period of the right of radio frequency use.
- Resolution No. 702/2018: this Resolution approved the new public price for the right to explore satellites and telecommunication services reducing the authorization fee to R\$400.00 for all telecommunication services.

- Resolution No. 703/2018: as discussed above, this Resolution sets a new cap for spectrum usage limits and allows a given player to retain more spectrum bandwidth (30% to 40% of the total available spectrum) depending on frequency range and applicable antitrust measures.

Review of the Current Regulatory Model for the Provision of Telecom Services

The Brazilian government is currently focused on reviewing the General Telecommunications Law to transform the previous fixed telephony concessions into authorizations, modifying the obligations related thereto.

On April 11, 2016, MCTIC issued guidelines to be followed by Anatel when implementing this transformation, moving to a more market-oriented licensing approach. These guidelines were issued following a public consultation that ended on January 15, 2016.

In general terms, the MCTIC's guidelines establish that public authorities should promote access to broadband service at affordable costs and levels, putting broadband at the center of public policy.

As a result, Anatel is expected to: (i) propose concrete rules and criteria to enable the phasing-out of concessions, (ii) highlight the consistency of the new licensing rules with the existing infrastructure coverage obligations, (iii) ensure service provision (including broadband) in less attractive economic areas, (iv) give incentives to concessionaires to migrate to the new licensing framework, (v) lessen obligations for fixed telephony, (vi) schedule the phasing-out of the retail price control over retail fixed telephony services, (vii) withdraw recurring licensing fees, (viii) 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 (ix) establish suitable mechanisms to ensure regulation compliance control.

As a result of the ongoing debate regarding the licensing regime, Anatel was tasked with reviewing concession contracts by December 2016. However, after the publication of Resolution No. 673, approved on December 30, 2016, the deadline for reviewing these contracts was postponed to June 30, 2017. In spite of the fact that the deadline has passed, revised concession contracts have been not signed yet.

A bill that proposes changes to the General Telecommunications Law and allows Anatel to change the licensing mode of telecommunications service is under review in the Brazilian Senate. According to the proposal, upon request of the STFC concessionaires, Anatel may authorize the migration of the concession agreements to authorizations, subject to the observance of certain requirements. Anatel will be responsible for determining the economic value associated with the migration, which shall be paid in exchange for investment commitments, prioritizing the implementation of network infrastructure with high capacity for data communication in locations without appropriated competition.

The bill also proposes changes in the radio frequency rules, allowing subsequent and unlimited renewals of radio frequency authorizations of up to 20 years each, generating an environment possibly more conducive to long-term investments. In addition, the bill favors the creation of a spectrum secondary market, allowing transfers of radio frequency authorizations between players, upon Anatel's approval. The economic and operational conditions will be defined by Anatel.

Currently, the bill is in the Senate, awaiting a vote. Even if the Senate approves the bill without changes in relation to the proposal approved by the House of Representatives, it still has to be submitted for presidential approval.

Also, there is a new Presidential Decree that may be issued in 2019 with the goal of updating and consolidating, in a single instrument, the public policies for the telecommunications in Brazil. The proposal places broadband at the center of public policy of Brazilian telecommunications. This decree, submitted to public consultation in October

2017, revokes and replaces three other decrees currently in force, bringing together in a single instrument the regulatory guidelines for the expansion of broadband services and digital inclusion in the country. The Decree will repeal Decree No. 4,733/2003, which provides for public telecommunications policies; Decree No. 7,175/2010, which established the National Broadband Plan (PNBL); and Decree No. 8.776/2016, which created the Brazil Intelligent Program, a new stage of expansion of the PNBL with actions to universalize access to the Internet and increase the average speed of fixed broadband in the country. The decree will also establish public and private investment priorities for the expansion of telecommunications infrastructure through fiber optics, radio and satellite.

Authorizations and Concessions

With the privatization of the Telebrás system and pursuant to the Minimum Law (*Lei Mínima*), Band A and Band B service providers were granted concessions under Cellular Mobile Service (*Serviço Móvel Celular*), or SMC, regulations. Each concession was a specific grant of authority to supply mobile telecommunications services in a defined geographical area, subject to certain requirements contained in the applicable list of obligations attached to each concession.

Our predecessors were granted SMC concessions and in December 2002, such SMC concessions were converted into PCS authorizations, with an option to renew the authorizations for an additional 15 years. We acquired PCS authorizations in conjunction with auctions of bandwidth by Anatel in 2001, and subsequently acquired additional authorizations and operations under the PCS regulations as well.

In December 2007, we acquired certain 3G frequencies sub-bands (1,900-2,100MHz), with national coverage; these authorizations were granted in April 2008 and are valid until 2023.

On May 30, 2011, we entered into two new RF terms, formalizing the acquisition of excess RF in the states of Minas Gerais, Paraná, Santa Catarina, Amapá, Roraima, Pará, Amazonas and Maranhão and those new terms expire in April 2023.

In October 2012, we acquired the 2,530-2,540 MHz and 2,650-2,660 MHz sub-bands, with national coverage, and the 450 MHz band in Espírito Santo, Paraná, Rio de Janeiro and Santa Catarina states (the 450 MHz band was jointly acquired with Intelig (now known as TIM S.A.)), which terms expire in October 2027.

In December 2014, we acquired the 718-728 MHz and 773-783 MHz sub-bands, with national coverage; these authorizations are valid until 2029. These sub-bands are partially available for mobile operation since broadcasters are still using them, or Anatel's approval required for their usage is still pending. The mobile operations on those sub-bands may only begin after the reallocation of broadcasting channels and following approval by Anatel and interference mitigation.

On March 4, 2015, by Decision No. 66/2015-CD, Anatel approved our renewal application related to the 4G Block (2500 MHz P Band) in Minas Gerais, and also approved our renewal application concerning the authorization terms of the D and E Bands (900 MHz and 1800 MHz). On July 22, 2015, Authorization Act No. 4710/2015-CD was issued (and subsequently published in the Official Gazette of July 28, 2015), extending the use of the aforementioned authorizations terms, until 2030 and 2028, respectively.

In December 2015, Anatel auctioned left over radio frequencies in the 1,800 MHz, 1,900 MHz and 2,500 MHz bands. We submitted bids for the left over lots of the 2,500 MHz 4G band, which had originally been auctioned in 2012. We were classified as the first-ranked bidder in the lots for Recife, in the state of Pernambuco, and Curitiba, in the state of Paraná, based on our bids which totaled R\$57.5 million. The corresponding authorization terms were excluded by Anatel in July 2016.

Because there is prejudicial unsolved interference in 3G frequency (F sub-band) in the São Paulo metropolitan area (AR11), TIM was granted an authorization to use the 900MHz spectrum under a secondary basis in such area. The last license was granted by Act No. 711 on March 2017 and is valid for 36 months (until March 2020).

The STFC and SCM authorization terms do not have an expiration date. In August 2017, TIM obtained an authorization to explore SLP, in order to use this license to operate a private network formed by point-to-point radio communication (radioenlaces). These radio licenses are valid for 15 years.

In connection with the conclusion of the Reorganization whereby TIM Celular S.A. was merged into TIM S.A. —see “Item 4. Information on the Company—History and Development of the Company—2018 Important Events—Corporate Reorganization”—, TIM S.A. holds all of the authorizations previously issued in the name of other companies controlled, directly or indirectly, by TIM Participações.

The following table shows each of our authorizations in effect on December 31, 2018:

Territory	450 MHz	800 MHz, 900 MHz and 1800 MHz	Additional Frequencies 1800 MHz	1900 MHz and 2100 MHz (3G)	2500 MHz V1 Band (4G)	2500 MHz P Band** (4G) 700 MHz
States of Amapá, Roraima, Pará, Amazonas and Maranhão	–	March, 2031*	April, 2023	April, 2023	October, 2027	PA – February, 2024* December, 2029
States of Rio de Janeiro and Espírito Santo	October, 2027	March, 2031*	ES – April, 2023–	April, 2023	October, 2027	RJ – February, December, 2024* 2029
States of Acre, Rondônia, Mato Grosso, Mato Grosso do Sul, Tocantins, Distrito Federal, Goiás, Rio Grande do Sul (except for the city of Pelotas and its surrounding region) and the cities of Londrina and Tamarana in the state of Paraná	PR – October, 2027	March, 2031*	April 2023	April, 2023	October, 2027	Curitiba – PR July, 2031 DF – February, 2024* December, 2029
State of São Paulo	–	March, 2031*	Interior – April, 2023–	April, 2023	October, 2027	– December, 2029 AR 41, except Curitiba and Metropolitan Region – February, 2024*
State of Paraná (except for the cities of Londrina and Tamarana)	October, 2027	September, 2022*	April, 2023	April, 2023	October, 2027	AR41, Curitiba and Metropolitan Region -July, December, 2031 2029
State of Santa Catarina City of Pelotas and its surrounding region in the State of Rio Grande do Sul	October, 2027	September, 2023*	April, 2023	April, 2023	October, 2027	– December, 2029
State of Pernambuco	–	April, 2024*	–	April, 2023	October, 2027	– December, 2029 Recife July, December, 2031 2029

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State of Ceará	–	November, 2023*	–	April, 2023	October, 2027	–	December, 2029
State of Paraíba	–	December, 2023*	–	April, 2023	October, 2027	–	December, 2029
State of Rio Grande do Norte	–	December, 2023*	–	April, 2023	October, 2027	–	December, 2029
State of Alagoas	–	December, 2023*	–	April, 2023	October, 2027	–	December, 2029
State of Piauí	–	March, 2024*	–	April, 2023	October, 2027	–	December, 2029
State of Minas Gerais (except for the cities in sector 3 of PGO for 3G and excess radio frequency)	–	April, 2028*	April, 2023	April, 2023	October, 2027	February, 2030*	December, 2029
States of Bahia and Sergipe	–	August, 2027*	–	April, 2023	October, 2027	–	December, 2029

* Terms already renewed for 15 years and therefore not entitled to another renewal period.

** Only covers complementary areas in the specified states. The Radio frequency Blocks of the Municipalities of the National Code (CN) 92, which were part of Lot 208, were returned.

According to the General Telecommunications Law and regulations issued by Anatel thereunder, 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 STFC incumbents are currently operating under the public regime. All the other telecommunications services providers in Brazil are currently operating under the private regime, including all the PCS services providers.

Telecommunications services providers under the private regime are classified as either providing a service of collective interest or a restricted interest. Collective interest private regime services are subject to requirements imposed by Anatel under their authorizations and the General Telecommunications Law. Restricted interest private regime services are subject to fewer requirements than public regime or collective interest private regime services. According to the General Telecommunications Law and the regulation thereunder, all the PCS services providers in Brazil operate under the collective interest private regime.

Obligations of Telecommunications Companies

In November 1999, Anatel and the Brazilian mobile service providers jointly adopted a Protocol for Mobile Cellular Service Providers, or the Protocol. The Protocol established additional quality of service targets and rates, which SMC operators were required to achieve by June 2001. Although the General Telecommunications Law does not specify any penalties for failing to meet the targets required by the Protocol, Anatel was required to examine the performance of the Brazilian telecommunications companies under the Protocol's standards. Despite migration to PCS in December 2002, from January to June 2003, we reported to Anatel regarding, and had complied with, all quality of service indicators applicable to SMC operators. The Protocol ceased to be applicable to TIM Sul, TIM Nordeste (each ultimately merged into TIM S.A.) and TIM Maxitel (merged into TIM Celular, which was ultimately merged into TIM S.A.) after July 2003.

Beginning in September 2003, we became subject to the PCS quality of service indicators. Our quality of service obligations under our PCS authorizations differ substantially from those under the previous SMC concessions. See “—PCS Regulation.” Since December 2003, we have achieved the majority of the quality service requirements applicable to the PCS service operators. Some of our PCS quality of service indicators are currently difficult to achieve due to, for example, our dependence on the performance of third parties and the continuing clarification of some of the quality of service measurements under the PCS rules. As a result, since 2004 Anatel has been filing administrative proceedings against TIM Celular (now TIM S.A.) and TIM Nordeste (each ultimately merged into TIM S.A.) for non-compliance with certain of our quality of service obligations. In some of these proceedings, Anatel applied a fee that did not cause a material adverse effect on our business, financial condition and results of operations. We will continue to strive to meet all of our quality of service obligations under the PCS authorizations.

In 2011, Anatel published Resolution No. 575/11 to Review of the Regulation on the Management of Quality of Service – PCS. The new regulation established new quality goals, evaluation criteria, data collection and quality monitoring of Service Providers – PCS. The Anatel regulation aims to create a comprehensive model of quality management of the PCS providers providing preventive and proactive on the part of Anatel, through the incorporation of indicators and benchmarks that allow the systematic evaluation of the quality of service in all its dimensions.

Anatel also published Resolution No. 574/11 in 2011, which set broadband quality measurement standards.

On November 9, 2017, Public Consultation No. 29/2017 was opened to review the quality framework, in which Anatel proposed a draft of a single Regulation on the Management of Quality with rules applicable to fixed, mobile, broadband and cable TV providers. Among the proposals – reportedly inspired by the theory of responsive regulation – are (i) the division of the quality indicators into Operational Indicators and Research Indicators for measuring the quality of service perceived by the user; and (ii) the measure of quality by municipality.

On January 2, 2018, the initial term for public comment on the proposal was extended for sixty (60) days and subsequently for thirty (30) more days, ending on April 8, 2018. The new regulation is still expected to be approved in 2019, and the new rules are expected to be in force starting in 2020.

PCS Regulation

In September 2000, Anatel promulgated regulations regarding PCS wireless telecommunications services that are significantly different from the ones applicable to mobile companies operating under Band A and Band B.

According to rules issued by Anatel, renewal of a concession to provide mobile telecommunications services, as well as permission from Anatel to transfer control of cellular companies, are conditioned on agreement by such cellular service provider to operate under the PCS rules. TIM Sul, TIM Nordeste and TIM Maxitel converted their cellular concessions into PCS authorizations in December 2002, and later transferred them to TIM Sul, TIM Nordeste and TIM Maxitel, which are now TIM S.A. (following the Reorganization and various intercompany mergers discussed herein) subject to obligations under the PCS regulations. See “—Authorizations and Concessions.”

In 2018, Anatel initiated administrative proceedings against TIM Celular (now TIM S.A.) for noncompliance with certain quality standards and noncompliance with its rules and authorization terms. We have been fined by Anatel in some proceedings and are still discussing the penalty imposed in appeals before the agency. As a result of these proceedings, Anatel applied some fines that did not cause a material adverse effect on our business. In the year ended December 31, 2018, the total amount of these fines was R\$662.3 million. However, only R\$31.3 million was classified as a “probable loss” by our legal advisors. We expect to sign a Conduct Adjustment Agreement in 2019 in order to reduce a substantial part of the fines.

We continue to do our best to fully comply with our obligations under the PCS regime or with future changes in the regulations to which we are subject. See “—Obligations of Telecommunications Companies,” “Item 3. Key Information—D. Risk Factors—Risks Relating to our Business” and “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal Proceedings.”

Significant Market Power

In November 2012, Anatel published a new competition framework known as the PGM 2012. Also in November 2012, Anatel published a series of regulations identifying groups with significant market power in the following relevant markets as defined by the PGM: (i) wholesale offer of fixed access infrastructure for data transmission through copper or coaxial cable in rates equal or higher than 10 Mbps (Act No. 6,617, of November 8, 2012); (ii) wholesale offer of fixed infrastructure for local and long distance transportation for data transmission in rates equal or higher than 34 Mbps (Act No. 6,619, of November 8, 2012); (iii) passive infrastructure for transport and access networks (Act No. 6,620, of November 8, 2012); (iv) mobile network termination (Act No. 6,621, of November 8, 2012); and (v) national roaming (Act No. 6,622, of November 8, 2012).

TIM was considered to have a significant market power in the following markets: (i) passive infrastructure in transport and access networks (provision of towers); (ii) mobile network termination (otherwise referred to as the mobile network termination market); and (iii) national roaming.

On December 5, 2016, Anatel published public consultations on (i) the revision of PGM’s relevant markets and remedies, and (ii) the proposal of a specific Regulation for the Approval of Reference Offers, for public comment until March 22, 2017.

In July 2018, ANATEL published the New PGMC, which revised PGMC 2012 and created two new markets: (i) interconnection for telephone traffic in fixed networks; and (ii) high capacity data transport. According to the New PGMC proposal, cities in Brazil will be classified by levels of competition (1 – competitive, 2 – moderately competitive, 3 – less competitive, 4 – non-competitive), and asymmetric measures will be applied according to the market competition. In addition, also based on the proposal submitted to public consultation, wholesale relevant markets will be defined as follows:

PGMC (2012)	New PGMC
Wholesale mobile call termination	Wholesale mobile interconnection
National roaming	National roaming
Full unbundling and bistream, or, wholesale fixed network infrastructure access less than 10 Mbps	Wholesale fixed network infrastructure access
Leased lines, interconnection class V, interlinking, or, wholesale fixed network infrastructure transport less than 34 Mbps	Leased lines
Ducts, trenches and towers, or passive infrastructure	Passive infrastructure – redefined * towers regulated by law
–	Wholesale fixed interconnection
–	High capacity data transport

Under the New PGMC, TIM is currently considered to have SMP in the following markets: (i) mobile network termination (otherwise referred to as the mobile network termination market); (ii) national roaming; and (iii) high capacity data transport (five municipalities). The measures applied to an SMP operator in those markets include: (i) the application of mobile termination rates on a glide path based on a price cap system and the partial application of the Bill & Keep system (at a 50% threshold (*i.e.*, a non SMP operator pays only if the terminated traffic on the SMP operator network is more than 50% of the total traffic exchanged) and only until the next revision of PGMC in 2021) and (ii) an obligation to offer the service of national roaming service to operators not having SMP.

Due to such classification, we are subject to increased regulation under the New PGMC, which could have an adverse effect on our business, financial condition and results of operations. Specifically, because we have been classified as having significant market power in the mobile network termination market, the rates charged by mobile service providers to other mobile service providers to terminate calls on their mobile networks, or VU-M, are regulated. On July 4, 2014, Anatel approved, by means of Resolution No. 639/2014, a rule for the definition of maximum reference rates for entities with significant market power, based on a cost model, for VU-M, TU-RL, and EILD. Pursuant to Anatel’s rule, reference rates will decline based on a glide path until the cost modeling known as BU-LRIC is applied (in 2019, for VU-M and TU-RL; and in 2020, for EILD). On July 7, 2014, Anatel published the corresponding Acts Nos. 6,210/2014, 6,211/2014 and 6,212/2014, which determined the specific reference rates effective as of February 2016. Because of our classification as having significant market power in the national roaming market, we must also offer roaming services to other mobile providers without significant market power at the rates approved by Anatel. We are also required to provide access to our high capacity data transport network due to our classification as having significant market power in that market.

For additional detail, see “—Lines of Revenue—Network Usage Charges,” “—Lines of Revenue—Roaming Fees,” “—Lines of Revenue—Interconnection Charges” and “—Lines of Revenue—Long Distance” above.

Interconnection Regulation

Telecommunication operators must publish a public interconnection offer on both economic and technical conditions and are subject to the “General Interconnection Regulatory Framework” issued by Anatel in 2005.

Also in 2005, Anatel issued a ruling for “Accounting Separation and Cost Accounting,” introducing the obligation of presenting the Accounting Separation and Allocation Document (*Documento de Separação e Alocação de Contas*), or DSAC, by the license holders and groups holding Significant Market Power in the offering of fixed and/or mobile network interconnection and wholesale leased lines (*Exploração Industrial De Linha Dedicada*), or EILD. Starting from 2006 (for fixed operators) and 2008 (for mobile operators related to the results of 2006 and 2007), operators

(TIM included) are delivering the requested information to Anatel.

In 2013, Anatel reviewed almost the entirety of DSAC. Pursuant to Resolutions No. 608 and 619, the level of information to be delivered to Anatel and the number of products analyzed were extended. Rules on costs allocation were also standardized in order to allow comparison of the results among operators.

With respect to mobile interconnection, in October 2011, Anatel established a mechanism for reducing fixed-to-mobile call rates, applying a reduction of 18% in 2012 and 12% in 2013. In November 2012, through Resolution 600, Anatel decided that the VU-M reference rates in 2014 would be 75% of the valid VU-M in 2013, and in 2015 by 50% of the valid VU-M in 2013. Based on that, in December 2013, VU-M prices for 2014 and 2015 were published in accordance with Resolution No. 600/2012.

In addition to the VU-M reduction, Anatel established a bill and keep, or B&K, rule between significant market power and non-significant market power PCSs. From January 2013 until February 2015, the B&K was 80%/20%. On February 12, 2015, Anatel approved, by means of Resolution No. 649/2015, the following new B&K percentages, amending the percentages established by Resolution 600: 75%/25%, from 2015 until 2016; 65%/35%, from 2016 until 2017; 55%/45%, from 2017 until 2018; and 50%/50%, from 2018 until 2019, which was the object of a judicial suit (ongoing), in order to suspend its effects. After 2019, the VU-M will be charged by the significant market power whenever their network is used to originate or to finish a call. In July 2015, we filed a lawsuit seeking to annul Resolution No. 649/2015 and maintain the percentages originally established by Resolution No. 600/2012, which currently remains pending a final decision. However, as discussed above, the New PGMC in 2018 set the partial Bill & Keep threshold to 50% (i.e., a non-SMP operator pays only if the terminated traffic on the SMP operator network is more than 50% of the total traffic exchanged) and will be applied until the next revision of PGMC scheduled for 2021. In addition, ANATEL determined the end of the existing additional 20% on the value of Mobile Termination Rate, or MTR, paid by SMP operators to non-SMP operators.

Related to fixed interconnection, Anatel revised the criteria for pricing the use of fixed networks in May 2012. According to such regulation, after January 1, 2014, a full B&K regime (in which no payments are due for the traffic termination) was implemented for local STFC operators dealing with other local STFC operators. Currently, therefore, no payments are due for the use of a local STFC operator's network by other local STFC operator. With respect to interconnection of STFC operators with long distance and mobile operators, we understand that, in 2012, when Anatel issued PGMC, the asymmetrical measure that permitted STFC operators without significant market power to charge a TU-RL 20% higher than the TU-RL charged by STFC operator, with significant market power was revoked. In September 2016, we filed a lawsuit on this subject, which is still pending a final decision.

On July 4, 2014, Anatel approved, by means of Resolution No. 639/2014, a rule for the definition of maximum reference rates for entities with significant market power, based on a cost model, for VU-M, TU-RL, and EILD. Pursuant to Anatel's rule, reference rates will decline based on a glide path until the cost modeling known as BU-LRIC is applied (2019, for VU-M and TU-RL; and 2020, for EILD). On July 7, 2014, Anatel published the corresponding Acts No. 6,210/2014, 6,211/2014 and 6,212/2014, which determined the specific reference rates effective as of February 2016.

On February 24, 2017, considering the glide path provided in Act No. 6,211, VU-M rates were again reduced, depending on the region, to the level of approximately R\$0.05 (five cents) and, in 2018, will also be reduced to levels of R\$0.03 (three cents) and, in 2019, will also be reduced to levels of R\$0.01 (one cent). In December 2018, ANATEL published Acts setting forth MTR which will be valid from 2020 until 2023.

Rate Regulation

Under our PCS authorizations, we are allowed to set prices for our service plans, subject to approval by Anatel, provided that such amounts do not exceed a specified inflation adjusted cap. Anatel currently uses the IST (*Índice de*

Serviços de Telecomunicações), a specific price inflation index that it developed, in evaluating prices and determining the relevant cap for prices charged in the telecommunications industry. As mentioned above, on July 4, 2014, Anatel approved the calculation of VU-M, TU-RL and EILD reference rates based on a cost model. We expect that the adjustment of our prices will follow the market trend, and that the adjustment will be below the annual inflation rate based on the IST.

Number Portability

In March 2007, Anatel issued a new regulation regarding number portability in Brazil for fixed telephony and PCS providers. Portability is limited to migration between providers of the same telecommunications services. For PCS providers, portability can take place when a customer changes its services provider within the same Registration Area as well as when a customer changes the service plan of the same area. Anatel finished the nationwide NP implementation schedule in March 2009.

Value-Added Services and Internet Regulation

Value-Added Services are not considered under Brazilian telecommunications regulations to be telecommunications services, but rather an activity that adds features to a telecommunications service. Regulations require all telecommunications service providers to grant network access to any party interested in providing Value-Added Services, on a non-discriminatory basis, unless technically impossible. Telecommunications service providers also are allowed to render Value-Added Services through their own networks. Internet connection, when offered to users on a single basis, by parties other than telecommunications service providers, is considered by Brazilian legislation to be a value-added service, and its providers are not considered to be telecommunications companies. Current regulations allow us or any other interested party to offer Internet connection through our network. In such case, Internet connection would be deemed as a portion of the telecommunications service that enables users to navigate the Internet.

In April 2014, the Brazilian President passed Law No. 12,965 of 2014, known as the Legal Framework for the Use of the Internet (*Marco Civil da Internet*), or the Internet Framework, which establishes the principles, guarantees, rights and duties for the use of the Internet in Brazil. Key topics covered in the Internet Framework are: 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 Presidential Decree No. 8,711/2016 was enacted by the Brazilian President on May 11, 2016 and provided additional detail on the Internet Framework in three main aspects: (i) clarification of the scope and implementation of the net neutrality rules, (ii) implementation of the rights and obligations related to privacy and data protection regarding Brazilian Internet users, and (iii) governance of the Internet Framework, including authorities entitled to enforce the legislations. This decree entered into force on June 10, 2016, however could be revoked or amended by a new presidential decree that may be issued in 2018 regarding public policies for telecommunications. See “—Review of the Current Regulatory Model for the Provision of Telecom Services.”

In August, 2018, the Brazilian president passed Law No. 13,709/2018, which altered the Internet Framework and established a comprehensive data protection system that applies across multiple economic sectors and contractual relationships (*Lei Geral de Proteção de Dados*), or the LGPD. LGPD has detailed rules and obligations regarding the collection, processing, storage and use of personal data and will affect all economic sectors, including the relationship between customers and suppliers of goods and services, employees and employers and other relationships in which personal data is collected, whether in a digital or physical environment. Such obligations will become effective within 18 months from the date of publication of the law (August 15, 2018), by which date all legal entities will be required to adapt their data processing activities to these new rules. Any additional privacy laws or regulations enacted or approved in Brazil or in other jurisdictions in which we operate could seriously harm our business, financial condition or results of operations.

We have set up a team tasked with adapting our processes and technologies to ensure compliance with the LGPD requirements. The Company will be working throughout 2019 to improve the protection of our customers' personal data according to this new regulation.

Frequencies and Spectrum Background

In connection with the PCS authorization auctions in 2001 and 2002, Anatel divided the Brazilian territory into three separate regions, each of which is equal to the regions applicable to the public regime fixed-line telephone service providers. PCS services could only be provided under Bands C, D and E at that time with initially 1800 MHz band and afterwards also the 900 MHz band. We acquired the D band in regions II and III and the E band in region I, completing our national coverage when considering TIM Sul, TIM Nordeste and Maxitel coverage (each ultimately merged into TIM S.A.).

We requested a renewal of our authorizations for the D and E bands (1800 and 900 MHz frequencies) in September 2013, given that the initial term for which the authorization was expiring. The process was reviewed by Anatel, which handed down a decision based on formal legal opinion by the Federal Attorney General on the matter. According to such decision, TIM was entitled under the current rules to a renewal of our authorizations for the D and E bands, which started on March 2016.

In December 2007, we acquired new authorizations for the 1800 MHz frequency in the São Paulo and Rio de Janeiro in order to improve our RF capacity in these regions. Within the same auction, Claro and Vivo acquired authorizations to provide PCS services in regions where we had historically provided services but where Claro and Vivo previously did not, using 1800 MHz and 1900 MHz bands. This resulted in increased competition in these regions. In the same auction, Oi received authorization to provide PCS services in the state of São Paulo using 1800 MHz (band M in the whole state and band E in the state's countryside).

In December 2007, we acquired 3G frequencies sub-bands (1900-2100MHz), with national coverage; these authorizations were granted in April 2008 and are valid until 2023. Oi, Claro, Vivo and Algar Telecom also acquired 3G frequencies sub-bands in the same auction carried out by Anatel. All the authorization winners were subject to coverage and/or expansion commitments, divided by Municipality among the winners, in unserved areas.

In December 2010, Anatel auctioned an empty 3G band of radio spectrum consisting of (10+10) MHz in 2.1 GHz in the whole country (the "H Band" Auction), and other left over frequencies in the 900 MHz and 1800 MHz bands that had not been assigned in previous auctions. In this auction:

- Of the 12 available lots in the H Band, 10 were awarded to Nextel, at the time a new entrant in the GSM market, which had traditionally offered trunking services in Brazil. Current operators were prevented from participating due to spectrum caps. Oi and CTBC (now known as Algar Telecom), managed to win the remaining two lots where they had cap availability.
- The new entrant will benefit from spectrum and infrastructure sharing, specifically in locations with less than 30,000 inhabitants, subjected to commercial agreements.
- TIM won individual block of frequencies in five service areas, strengthening its presence in the North, Santa Catarina, Minas Gerais and Paraná, bidding a total of R\$81.8 million, to be paid proportionately to the remaining years in the existing authorization licenses (remaining years/15).
- VIVO won blocks in 900 MHz and due to available cap, managed to win lots of 1700/1800 MHz in all regions, completing a national coverage of (10+10) MHz in this band.
- Claro won blocks of spectrum in the 1700/1800 MHz band.

In December 2011, Anatel started auction No. 001/2011-PVCP/SPV, pursuant to which 16 blocks in the 1,800 MHz band were sold to Claro, Oi, CTBC and TIM. As a result of our participation in the auction, we expanded our 2G coverage and increased our presence in the northern and midwestern regions of Brazil, including the states of Paraná, Espírito Santo, Rio Grande do Sul, Santa Catarina and Minas Gerais. Our corresponding RF authorization periods were formalized with Anatel in May 2013.

In 2012, Anatel established a bidding process in order to comply with Presidential Decree No. 7.512 of June 2011, which set April 2012 as the deadline to auction the 2.5GHz band, in order to introduce 4G technology in Brazil. Anatel modeled the auction with two national blocks of (20+20) MHz (W and Z) and two national blocks of (10+10) MHz (V1 and V2). In order to guarantee full rural service by 2018, Anatel linked the 4G blocks to the 450MHz band

in specific geographic regions of Brazil.

We participated in the auction as a group bidding in the name of TIM and Intelig (now known as TIM S.A.). We did not bid for the W block (Amazonas as a rural area), which we viewed as having a high premium if compared to the X block (67%), whereas we successfully acquired the V1 block, which in our view held the best CAPEX/OPEX profile associated with rural services in its selected regions (RJ, ES, SC and PR). The joint bid allowed us to take advantage of the flexibility of the auction rules. These bands brought heavy coverage obligations as its short-range characteristics demands large investments.

The year 2013 began with indications from the government and Anatel that they hoped to speed up the move to digitalization of TV in Brazil. In November 2013, Anatel approved the dedication of a single band, of the 700MHz spectrum, exclusively to mobile services and in September 2014, Anatel concluded the 700 MHz spectrum auction that granted to TIM, Vivo, Claro and Algar the operation of the 700 MHz frequency for the 4G mobile technology, to be added to the current LTE service in the 2.5 GHz RF. We bid on Block 2 of that auction, for national coverage of the 700 MHz band, and won the same with a bid of R\$1.947 billion (a 1% premium over the minimum price of R\$1.927 billion). The 700MHz spectrum, with its long range and good penetration characteristics, is very important to the expansion of the mobile data network in the country, offering even better 4G navigation quality to customers and allowing service to reach a greater number of users, supporting both rural obligations and city coverage. Another benefit of our acquisition of Block 2 of the 700MHz spectrum is the potential for economies of scale with respect to equipment and synergy with the Asia-Pacific Telecommunity, or APT, band plan and the European digital dividend for the spectrum.

The auction also required the winning bidders to proportionally reimburse the broadcasters for the cleanup of the spectrum previously held and used by them. We spent R\$1.199 million in order to create in March 2015 an entity called the Entity for Administration of TV and RTV Channel Relocation and Digitalization Process, or EAD, with the other winning bidders, to ensure the spectrum cleanup. The price allocated to the cleanup of the spectrum related to unsold blocks was shared proportionately among the winning bidders who bought the other blocks. To offset such additional cost to the winning bidders, the price of the 700 MHz spectrum was discounted using Anatel's WACC methodology.

The Authorization Terms for usage of the 700 MHz spectrum were signed in December 2014 and the Articles of Association and Bylaws of EAD were filed on March 2, 2015. Our EAD payments were completed in January 2018.

In December 2015, Anatel auctioned remaining radio frequencies in the 1,800 MHz, 1,900 MHz and 2,500 MHz bands. We submitted bids for the left over lots of the 2,500 MHz band, which had originally been auctioned in 2012. This particular band spectrum provides for 4G mobile services. We were classified as the first ranked bidder in the lots for Recife, in the state of Pernambuco, and Curitiba, in the state of Paraná, based on our bids which totaled R\$57.5 million. The corresponding authorization terms were executed by Anatel in July 2016.

In connection with the conclusion of the Reorganization whereby TIM Celular S.A. was merged into TIM S.A., see "Item 4. Information on the Company—History and Development of the Company—2018 Important Events—Corporate Reorganization"), TIM S.A. holds all of the authorizations previously issued in the name of other companies controlled, directly or indirectly, by TIM Participações.

VU-M and Wholesale Market

The interconnection of telecommunication operators is mandatory, allowing the users of different services to make calls from one network to another. In the case of PCS, Anatel has established that, whenever its network is used to originate or to receive calls, the operators will receive the VU-M, also known as an interconnection rate or mobile termination rate, set by free agreement. Anatel urged us to adopt a single VU-M per region, as such region is set out in the PCS General License Plan (*Plano Geral de Autorizações*), or PGA, which began on November 1, 2010. We declined to do so and instead chose to commercially negotiate VU-Ms with different providers. Under applicable regulations, VU-M rates could be negotiated among operators with reference rates only applied by Anatel in case of dispute.

Industrial Exploration of Dedicated Lines

In December 2010, Anatel approved a public hearing that considered alterations of the Industrial Exploration of Dedicated Lines (*Exploração Industrial de Linha Dedicada*) or EILD, which established mechanisms for the operation of transmissions circuits up to 34 Mbps to increase transparency between operators and concessionaires. In May 2012, Anatel approved the new EILD regulations (*Regulação de Exploração Industrial de Linha Dedicada*), or REILD, detailing mechanisms to optimize the operating structure for transmission loop contracts in order to increase contract price transparency and affording equal treatment to independent service providers from concessionaire groups. The REILD specifically sets out more effective rules on project definition including Standard EILD or Special EILD, in addition to contract and delivery terms, and specifies EILD delivery dispute resolution procedures. Concurrently, in May 2012, Anatel approved new EILD reference prices, a step towards value fixation in controversies between service providers.

Considering that EILD is also a market subject to the asymmetric regulation defined by Anatel in the PGMC, operators classified by Anatel as pertaining to group with significant market power in the EILD market, such as Oi, were required to submit reference prices and offers for Anatel's approval, as well as to only offer EILD through a specific system designed for the PGMC. In September 2013, Anatel ratification, for the first time, reference prices and offers of the operators with significant market power in the EILD market. At least every six months new reference prices and offers must be submitted for Anatel's approval. We are not currently classified as having significant market power in the EILD market.

Nevertheless, the TIM network is still growing and, with its backbone now reaching the North region of Brazil by using optical fiber technologies and not only via satellite, this has allowed TIM to strengthen and expand the services offered in that region, particularly in the states of Pará, Amapá and the city of Manaus, the capital of the state of Amazonas and a very important industrial zone.

The greatest benefits of the use of the optical fiber technology are the higher network stability and assurance, greater voice and data traffic capacity and the higher transmission rates that we can now provide to our customers, all of which are essential features to support the increasing telecommunication services demands in the region.

We have started discussions to apply the EILD reference rates based on cost model to the existing agreements we have with operators with significant market power in the EILD market. As part of the strategy of reducing operating expenses and as consequence of the expansion of our optic network infrastructure we are gradually deactivating leased lines such as EILD. The agreements for network sharing between the national operators is also a key factor to the reducing of leased lines. The number of leased circuits has considerably decreased along the last year. New lines are hired only in the cases where leasing is demonstrated to be the most cost effective solution.

Costs Modeling

The implementation of a costs model by Anatel has been in development since March 2005, when the Separation and Allocation of Accounts Document (*Documento de Separação e Alocação de Contas*), or DSAC was approved, for pricing of STFC and PCS interconnection, as well as wholesale market inputs, in particular with regards to industrial exploitation of the dedicated lines, or EILD and unbundling.

In July 2014, Anatel published the final decision regarding the cost modeling to set the wholesale reference values for the fixed and mobile access and interconnection services, as well as the maximum reference values for leased lines.

Anatel established that TU-RL and VU-M, are cost oriented starting from February 2016 and reaching the efficient cost level based on BU-LRIC model in 2019. For EILD, the efficient cost level will only be reached in 2020. See "Item 3. Key Information—D. Risk Factors—Risks Relating to the Brazilian Telecommunications Industry—Anatel classified us as an economic group with significant market power in some markets and are now subject to increased regulation."

In December 2018, Anatel published Acts with new values for VU-M (2020-2023), TU-RL, TU-RIU 1, TU-RIU2 (2020-2023) and EILD (2020). See "—Interconnection Regulation."

Migration of the Mobile Networks with Analog Technology

In February 2011, Anatel approved Resolution No. 562/11, which modified a provision of the regulation on conditions of use of RF, determining that, after a period of 360 days from the publication, the use of analog technology in RF sub bands of 800 MHz would no longer be allowed.

In relation to the use of such RF, we no longer have subscribers of analog technology (AMPS). However, our analog networks were still used by STFC concessionaires to provide services to subscribers in rural areas of the country, through a service called RuralCel.

In December 2016, Anatel approved Resolution No. 672/16, which prohibited the use of analog technology in the radio frequency sub bands of 800 MHz, 900 MHz, 1,800 MHz, 1,900 MHz and 2,100 MHz. We shut down our RuralCel service in 2017, and consequently turned off the related radio base stations, as attested to by Oi and recognized by Anatel in Decision-making No. 6/2017.

Quality Management Regulation

In October 2011, Anatel published PCS and SCM quality management regulations to establish quality parameters which were to have been met by the mobile telephone and Internet connection operators in up to 12 months. Most quality parameters established became effective in October and November 2012.

Among such quality parameters, most notable are the ones relating to the quality of the networks, both mobile and fixed, creating obligations of minimum and average speeds in numbers, higher than those then currently used by operators, which required investments so that such obligations could be met.

As a response to the need to better quantify the financial impacts, Oi has presented a cancellation request along with a revision request to Anatel for the presentation of technical surveys of the economic impacts of the new regulations. The aforementioned request was submitted for a public hearing by Anatel, which resulted in a series of differing opinions regarding quality measures by the different operations that are currently being considered by Anatel.

With regard to STFC, Anatel approved in December 2012 the Quality Management Regulation for STFC service providers, the purpose of which is the creation of a new quality management model available, such as Quality Management Regulation for PCS and SCM.

In February 2013, Anatel published STFC quality management regulations to establish quality parameters which should be met by fixed telephone operators in 120 days. All parameters established became effective in June 2013.

In November 2017, Anatel launched a new public consultation No. 29/2017 in order to review its proposal for a new quality regulation framework, or RQUAL. RQUAL applies to all telecommunication services on a municipal level and sets forth new obligations for service providers, such as a user compensation model and a mandatory ombudsman and grants customers additional rights including the possibility of terminating their service agreement without penalty in case of poor service quality. This public consultation closed in April 2018. Anatel expects to publish the new RQUAL in the first half of 2019, and the new rules are expected to be in force in 2020.

Anatel Administrative Proceedings

Under the terms of its PCS authorization, TIM Celular (now TIM S.A.) implemented mobile personal telecommunications coverage for the assigned area. Under such term of authorization, TIM Celular (now TIM S.A.) is required to operate in accordance with the quality standards established by Anatel. If it fails to meet the minimum quality standards required, TIM Celular (now TIM S.A.) is subject to Obligation Non-Compliance Determination Procedures, or PADO, and applicable penalties. Anatel has brought administrative proceedings against the TIM Group, which are currently pending for (1) noncompliance with certain quality service indicators (PGMQ); and (2) default of certain other obligations assumed under the Terms of Authorization and pertinent regulations. In its defense before Anatel, the TIM Group attributed the lack of compliance to items beyond its control and not related to its activities and actions. We cannot predict the outcome of these proceedings at this time, but have accrued the amount

in our balance sheet as a provision for all those cases in which we estimate our loss to be probable.

Disclosure Pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act

Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012 added Section 13(r) to the Exchange Act. Section 13(r) requires an issuer to disclose in its annual or quarterly reports filed with the SEC whether the issuer or any of its affiliates has knowingly engaged in certain activities, transactions or dealings with the Government of Iran, relating to Iran or with designated natural persons or entities involved in terrorism or the proliferation of weapons of mass destruction during the period covered by the annual or quarterly report. Disclosure is required even when the activities were conducted outside the United States by non-U.S. entities and even when such activities were conducted in compliance with applicable law.

We are also required to disclose our affiliates' activities relating to Iran and Syria. TIM S.A. has entered into Roaming Agreements for the provision of telecommunication services with mobile telephone network, or MTN, from Iran and Syriatel from Syria.

In accordance with our Code of Ethics, we seek to comply with all applicable laws. The Code of Ethics is available on our website: www.tim.com.br/ir.

TIM Participações activities relating to Iran, Syria, Sudan and North Korea

TIM Participações is not, to its knowledge, engaged in any activities, transactions or dealings with the Government of North Korea, Iran, Syria and Sudan, or the Designated Countries.

The activities, transactions or dealings TIM Participações had in the year ended December 31, 2018 in its knowledge, related in any way to Designed Countries are roaming agreements for the provision of telecommunication services, which allow our mobile customers to use their mobile devices on a network outside their home network, or Roaming Agreements. In our view, the amounts related to these operations, detailed below, are immaterial in our business. The Company does not have any agreement with providers from North Korea.

Roaming Agreements with the following local mobile phone operators:

- MTN Irancell, in Iran;
- Sudanese Mobile Telephone (Zain) Co. Ltd, in Sudan; and
- Syriatel Mobile Telecom SA and MTN Syria (JSC), in Syria.

The impact on our net profit (loss) arising from Roaming Agreements with networks of the Designated Countries is detailed as follows:

	Year ended December 31, 2018	
	Revenues	Charges
	(thousands of reais)	
North Korea	—	—
Iran	4	36
Sudan	2	18
Syria	1	30
Total	7	84

Telecom Italia activities relating to Designed Countries

The information in this section is based solely on information provided to us by our parent Telecom Italia for purposes of complying with our obligations under Section 13(r) of the Exchange Act.

Telecom Italia informs us that the activities, transactions or dealings it and its consolidated subsidiaries had in the year ended December 31, 2018 that, to its knowledge, relate to Designated Countries are (1) Roaming Agreements, (2) international telecommunications services agreements with international carriers, which cover delivery of traffic, or

International Carrier Agreements, and (3) commercial sale and other agreements, or Commercial Sale and Other Agreements.

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Telecom Italia informs us that the only activities that it and its consolidated subsidiaries had in the year ended December 31, 2018 that, to its knowledge, relate in any way to the Designated Countries are:

Roaming Agreements

Its Roaming Agreements are with the following local mobile phone operators:

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

	Year ended December 31, 2018			
	Revenues	Charges	Receivables	Payables
	(thousands of euros)			
North Korea	—	—	—	—
Iran	5	82	694	2,692
Sudan	10	90	52	53
Syria	5	14	45	90
Total	20	186	791	2,835

The amounts of revenues, charges, receivables and payables are considered *de minimis* by Telecom Italia's compared to its consolidated revenues, operating expenses, trade receivables and trade payables, respectively.

International Carrier Agreements

Telecom Italia's subsidiary Telecom Italia Sparkle S.p.A., or TI Sparkle, directly and through its subsidiaries, has agreements with the Telecommunication Company of Iran (TCI) in Iran; Sudan TLC (former PT&TG PUBLIC SUDAN), Sudatel Telecom Group, ZAIN Sudan and Canartel in Sudan; and Syrian Telecom Establishment (STE) (Directorate General of Syria) in Syria.

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

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

The purpose of these International Carrier Agreements is to allow the uninterrupted exchange of international traffic. Consequently, Telecom Italia intend to continue maintaining these agreements.

	Year ended December 31, 2018			
	Revenues	Charges	Receivables	Payables
	(thousands of euros)			
North Korea	—	—	—	—
Iran	438	5	5,493	5,151
Sudan	1,580	1,936	11,511	11,832
Syria	4,649	4,669	8,042	8,363
Total	6,667	6,610	25,046	25,346

The amounts of revenues, charges, receivables and payables are considered *de minimis* by Telecom Italia's compared to its consolidated revenues, operating expenses, trade receivables and trade payables, respectively.

Commercial Sale and Other Agreements

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

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

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

	Year ended December 31, 2018	
	Revenues	Receivables
	(thousands of euros)	
North Korea	—	—
Iran	—	502
Sudan	202	333
Syria	905	1,352
Total	1,107	2,187

The amounts of revenues, charges, receivables and payables are considered *de minimis* by Telecom Italia's compared to its consolidated revenues, operating expenses, trade receivables and trade payables, respectively.

C. Organizational Structure

We are part of the Telecom Italia Group, which is engaged in the communications sector and, particularly, the fixed and mobile national and international telecommunications sector. The operating segments of the Telecom Italia Group are organized according to the respective geographical location of the telecommunications business (Domestic—Italy and Brazil). We are currently held, directly and indirectly, by Telecom Italia through its wholly owned subsidiary, TIM Brasil, which as of December 31, 2018 held 66.58% of our shares. In turn, the single largest shareholder of Telecom Italia is Vivendi, which holds, directly, a stake of approximately 23.94% of ordinary share capital. Substantially all assets held by TIM Participações consist of the shares of its wholly owned subsidiary TIM S.A. (known, until its corporate name change in September 2017, as Intelig, and into which TIM Celular was merged in October 2018 in connection with the Reorganization) (incorporated in the Federative Republic of Brazil and headquarters located in the State of Rio de Janeiro).

As mentioned above, on July 25, 2017, the Company's Board of Directors approved the Reorganization, under which TIM Celular was to be merged into TIM S.A. In connection with the Reorganization, Intelig was transformed by corporate act into a closely held joint stock company and its corporate name was changed to TIM S.A. On October 31, 2018, the Reorganization was concluded and the merger of TIM Celular into TIM S.A. was completed, transferring all

of TIM Celular's operations to TIM S.A., and with TIM S.A. succeeding to all of TIM Celular's assets, rights and liabilities. The Reorganization had the objective of capturing operational and financial synergies, through the implementation of a more efficient process structure, as well as accounting and internal control systems. TIM Participações holds 100% of the shares of TIM S.A.

The following chart illustrates our ownership structure prior to the Reorganization:

The following chart illustrates our current ownership structure:

D. Property, Plants and Equipment

Our principal properties consist of radio frequencies, transmission equipment, switching exchanges and gateway equipment, which connect calls to and from customers and enables data traffic connections, and radio base stations, which comprise certain signal transmission and reception equipment covering a defined area. At our radio base station, we have also installed antennas and certain equipment to connect these antennas with our switching equipment. As of December 31, 2018, we had more than 24 thousand eNodeB, more than 16 thousand NodeB, almost 13 thousand BTS and more than 85 thousand kilometers in fiber optic networks. We generally lease or buy the sites where our mobile telecommunications network equipment is installed. Over the course of financial year 2018, we had leased approximately 113,197 square meters of real property, all of which was available for office space. We also lease approximately 1,364 square meters of commercial office space, and 24,049 square meters of stores operated by us. There are no material encumbrances that may affect our utilization of our property or equipment. All of our property and equipment is owned or leased domestically; we do not own or lease any property or equipment outside Brazil.

Item 4A. Unresolved Staff Comments

None.

Item 5. Operating and Financial Review and Prospects

A. Operating Results

The following discussion of the Company's financial condition and operating results should be read in conjunction with the Company's audited consolidated financial statements as of and for the years ended December 31, 2018, 2017 and 2016 included in this annual report that have been prepared in accordance with IFRS, issued by IASB as well as with the information presented under "Item 3. Key Information—A. Selected Financial Data."

Brazilian Political and Economic Overview

The year 2018 marked the improvement of the Brazilian economy with the continued recovery of GDP, which grew by 1.3% after declining in 2015 and 2016, mainly driven by services, investments and trade surplus. The trade balance closed the year with a surplus of U.S.\$62 billion, representing a growth of 9.3% compared to 2017. Of note was the 25.4% increase in exports that mostly offset the 28.3% increase in imports. Inflation, measured by the IPCA, was under strict control and, by the end of 2018, it was at 3.75%, below the target set by the Central Bank. The performance is explained by the slow economic recovery and the still relatively high unemployment rate. The SELIC, or basic interest rate, was further reduced in 2018 and closed the year at a historical low of 6.50%, a continued reduction of 0.50 percentage points compared to the closing of 2017. This movement is explained by the still modest economic recovery of the country and the lower expectation of inflation. Despite the overall positive result, instability continued to mark the political environment, leading to uncertainties regarding the approval of fiscal and political reforms, in particular the public pension reform. Also, the Brazilian economy continued to face uncertainty over the presidential elections in October 2018, in which Jair Bolsonaro was elected. We cannot predict the effects of further political developments on the Brazilian economy, including the policies the future president may adopt or alter during his mandate or the effect that any such policies might have on our business and on the Brazilian economy.

Internationally, the continuous military posturing, particularly between the United States and North Korea, and enhanced trade disputes, especially between the United States and China, brought volatility to the markets, generating strong fluctuations in securities trading and commodities markets. In Europe, levels of economic activity entered a slower growth trajectory, as political tensions within the Eurozone and discussions regarding Brexit continue (see "Item 3. Key Information—D. Risk Factors—We may be impacted by volatility in the global financial markets"). In the United States, government proposals, the 2018 midterm elections, concerns regarding the current administration's international policy and the U.S. Federal Reserve Board's monetary policy have set a tone of uncertainty about the sustainability of global economic growth in the years to come.

In regard to foreign exchange, the Brazilian real depreciated 18.5% compared to the U.S. dollar in 2018. During the year, the exchange rate fluctuated again this year due to continued reports of corruption cases in Brazil, expectations regarding the presidential elections in 2018, adjustments to Brazilian monetary policy, international trade disputes, and reforms proposed by the U.S. government.

Impact of Inflation on Our Results of Operations

Inflation directly impacts our results of operations as certain of our assets and liabilities are subject to monetary adjustments by reference to indexes that measure or that are impacted by inflation such as IPCA, TJLP, and SELIC. In 2018, the net impact of inflation adjustments was a loss of R\$133 million and in 2017, was a loss of R\$238 million.

The net impact in 2018 can be explained by the gains arising from restatements of taxes and the losses arising from the provisions for the aggregate contingent value of civil, labor and tax claims pending against us. The loss in 2017 can be explained by inflation adjustment on loans from BNDES, and, to a lesser extent, losses due to inflation adjustments on provisions for the aggregate contingency value of public civil actions and lawsuits pending against us.

Sale and leaseback

A sale and leaseback transaction is one where the group sells an asset and immediately reacquires the use of the same asset by entering into a lease agreement with the buyer. The accounting treatment of the sale and leaseback transaction depends upon the substance of this transaction (by applying the principles of lease classification) and whether or not the sale was made at the asset's fair value.

For financial sale and leaseback, the total gain is deferred and amortized over the lease term. For operational sale and leaseback, generally the assets are sold at fair value, and consequently, the gain or loss from the sale is immediately recognized in the income statement.

At the beginning of the lease term, the Company recognizes finance leases as assets and liabilities on its balance sheet at amounts equal to the fair value of the leased property or, if lower, the present value of the minimum lease payments, each determined at the beginning of the lease.

The discount rate used in a sale and leaseback transaction is determined based on observable market transactions where the lessee would have to pay on a similar lease or borrowing arrangement contract or loan. As mentioned in Note 16 to our consolidated financial statements, discount rates applied by management in the transactions carried out during the year were decisive for the calculation of the portion of the gain recorded through profit and loss, as well as the portion of deferred gain and amortized over the lease term.

Critical Accounting Policies

Critical accounting policies are those that are important to the presentation of our financial condition and results of operations and require management's most subjective, complex judgments, often requiring management to make estimates about the effect of matters that are inherently uncertain. As the number of variables and assumptions affecting the possible future resolution of the uncertainties increases, those judgments become more complex.

Accounting estimates and judgments are continuously reassessed. They are based on the Company's historical experience and other factors, such as expectations of future events, considering the circumstances presented as at the base date of the financial statements.

By definition, the accounting estimates resulting from such assumptions rarely equal the actual outcome. The estimates and assumptions that present significant risk with probability to cause relevant adjustments in the book values of assets and liabilities for the next fiscal years are shown below. We also describe our significant accounting policies, including the ones discussed below, in Note 2 to our consolidated financial statements.

Impairment Losses of Non-Financial Assets

Losses from impairment take place when the book value of assets or cash generating unit exceeds the respective recoverable value, which is considered as the fair value less costs to sell, or the value in use, whichever is greater. The calculation of the fair value less costs to sell is based on the information available from sale transactions involving similar assets or market prices less the additional costs incurred to dispose of those assets. The value in use is based on the discounted cash flow model. Cash flows derive from the Company's business plan. Since this is an ongoing business, as from the fifth projection year a perpetuity of nominal growth of cash flows was estimated.

Any reorganization activities to which the Company has not committed itself on the financial statements disclosure date on which the financial statements are reported or any material future investments aimed at improving the asset base of the cash generating unit being tested are excluded for the purposes of the impairment test.

The recoverable value is sensitive to the discount rates used in the discounted cash flow method, as well as with expected future cash receivables and the growth rate of revenue and expenses used for extrapolation purposes. Adverse economic conditions may lead to significant changes in these assumptions.

At December 31, 2018 and 2017, the principal non-financial assets valued in this way were goodwill recorded by the Company (see Note 3.a to our consolidated financial statements), and the fair value of goodwill was substantially in excess of its net book value.

Income Tax and Social Contribution (Current and Deferred)

Income tax and social contribution (current and deferred) are calculated in accordance with interpretations of the legislation currently in force. This process normally includes complex estimates in order to define the taxable income and differences. In particular, deferred tax assets on income tax and social contribution losses and temporary differences are recognized to the extent that it is probable that future taxable income will be available and can be offset. The recoverability of the deferred income tax on tax and social contribution losses and temporary differences takes into account estimates of taxable income (see Note 3.b to our consolidated financial statements).

Provision for Legal and Administrative Proceedings

Legal and administrative proceedings are analyzed by the Company's management and internal and external legal advisors. The Company's reviews take into account factors such as the hierarchy of laws, case law available, recent court decisions and their relevance in the legal order. Such reviews involve the judgment of our management (see Note 3.c to our consolidated financial statements).

Fair Value of Derivatives and Other Financial Instruments

Financial instruments presented at fair value in the balance sheet are measured using evaluation techniques that consider observable data or observable data derived from the market (see Notes 3.d and 36 to our consolidated financial statements).

Unbilled Revenues

Considering that some billing cut-off dates occur at intermediate dates within the months, at the end of each month there are revenues already earned by the Company but not effectively billed to the customers. These unbilled revenues are recorded based on estimates which take into account historical data of usage, number of days since the last billing date, among other factors.

Results of Operations

The following discussion should be read in conjunction with "Item 4. Information on the Company" and "Item 3. Key Information." As set forth in greater detail below, our financial condition and results of operations are significantly affected by Brazilian telecommunications regulation, including the regulation of rates. See "Item 4. Information on the Company—B. Business Overview—Regulation of the Brazilian Telecommunications Industry—Rate Regulation." Our financial condition and results of operations have also been, and are expected to continue to be, affected by the political and economic environment in Brazil. See "Item 3. Key Information—D. Risk Factors—Risks Relating to Brazil."

The following table shows certain components of our statement of operations for each year in the three-year period ended December 31, 2018, as well as the percentage change from year to year.

	Year ended December 31,			Percentage change	
	2018	2017	2016	2018 – 2017	2017 – 2016
	(in thousands of reais)				
Revenue.	16,981,329	16,233,959	15,617,413	4.6	3.9
Cost of services provided and goods sold	(7,701,418)	(7,740,150)	(7,693,406)	(3.8)	0.6
Gross income..	9,279,911	8,493,809	7,924,007	9.3	7.2
Operating income (expenses):					
Selling expenses	(4,970,780)	(4,575,177)	(4,719,029)	8.6	(3.0)
General and administrative expenses	(1,608,319)	(1,424,643)	(1,258,722)	12.9	13.2
Other income (expenses), net	(283,289)	(298,710)	(522,061)	(5.2)	7.4
Operating income (expenses)	(6,862,388)	(6,298,530)	(6,499,812)	9.0	0.9
Operating income	2,417,523	1,933,352	1,424,196	25.0	35.8
Financial income (expenses):					
Financial income	412,733	512,565	750,450	(19.5)	(31.7)
Financial expenses	(951,439)	(1,009,653)	(1,156,485)	(5.8)	(12.7)
Foreign exchange variations, net	1,373	(748)	(4,845)	n.a.	(84.6)
Financial income (expenses)	(537,333)	(497,836)	(410,880)	7.9	21.2
Income before income and social contribution taxes	1,880,190	1,435,516	1,013,316	31.0	41.7
Income and social contribution taxes	664,911	(201,009)	(262,889)	n.a.	(23.5)
Net income for the year	2,545,101	1,234,507	750,427	106.2	64.5

Results of Operations for the Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017***Operating Revenues***

Our operating revenues consisted of:

- Mobile and Fixed Services: (i) local and long distance voice, (ii) data and content (Value-Added Services), (iii) interconnection, and (iv) other services.
- Product Revenue: sale of handsets and accessories.

The composition of our operating revenues by category of service is presented in Note 27 to our consolidated financial statements and discussed below. We do not determine net operating revenues or allocate cost by category of service.

The following table shows the breakdown of our operating revenue, as well as the percentage change of each component from the prior year, for each of 2018 and 2017:

Statement of Operations Data: Operating Revenues

	Year ended December 31,		Percentage
	2018	2017	change
	(in millions of reais)		2018 – 2017
Gross operating revenue	24,232	22,611.1	7.2
Deductions from gross revenue	(7,251)	(6,377.1)	13.7
Total revenue	16,981.3	16,234.0	4.6

Our gross operating revenue was R\$24,232 million for the year ended December 31, 2018, representing a gain of 7.2% as compared to our gross operating revenue of R\$22,611 million for the year ended December 31, 2017. This gain was mainly due to the increase of mobile service revenue, which increased by 4.5% compared to the year ended December 31, 2017, and by the increase of landline service revenue, which increased by 8.3% for the year ended December 31, 2018, compared to the year ended December 31, 2017. During the year, we had an increase in the number of clients who adhered to loyalty offers, increasing the discount given to clients. This is one of the pillars of the strategy of migrating clients to higher-value plans.

Deductions from gross revenue for the year ended December 31, 2018 were R\$7,251 million, an increase of R\$6,377 million or 13.7% compared to the year ended December 31, 2017. This dynamic is directly related to the growth in gross revenue explained above.

Our revenue for the year ended December 31, 2018 was R\$16,981 million, an increase of 4.6% as compared to the year ended December 31, 2017. Net mobile service revenue increased 4.5% for the year ended December 31, 2018 as compared to the year ended December 31, 2017, from R\$14,687 million in the year ended December 31, 2017 to R\$15,354 million in the year ended December 31, 2018. Net landline service revenue increased by 8.3%, to R\$852 million for the year ended December 31, 2018 from R\$787 million for the year ended December 31, 2017, mainly explained by the results from the strong performance of TIM Live, which more than offset the decline in revenues from other fixed segments (such as corporate and wholesale).

The Company's management understands that a breakdown of net revenue can be helpful in an analysis of the Company's revenue dynamics. The details of net revenue and the main highlights are presented below:

Revenue Breakdown

	Year ended December 31, 2018 2017 (in millions of reais)		Percentage change 2018 – 2017
Total revenue	16,981.3	16,234.0	4.6
Service revenue	16,206.2	15,474.1	4.7
Service revenue – mobile	15,354.07	14,687.1	4.5
Client generated	14,043.5	13,379.6	5.0
Interconnection	712.2	835.2	(14.7)
Others	598.3	472.3	26.7
Service revenue – landline	852.3	787.1	8.3
Goods sold	775.1	759.8	2.0

Service Revenue

Service revenue for the year ended December 31, 2018 was R\$16,206 million, an increase of 4.7% compared to R\$15,474 million in the year ended December 31, 2017. Revenue from mobile services, or MSR, increased 4.5% to R\$15,354 million for the year ended December 31, 2018, from R\$14,687 million for the year ended December 31, 2017, mostly influenced by an increase in client generated revenues, or CGR, which are composed of local voice revenues, long distance voice and data and content revenues. We also had a decline in interconnection revenues, which was almost entirely offset by an increase in other revenues.

As mentioned above, client generated revenues or CGR increased by 5.0%, from R\$13,380 million for the year ended December 31, 2017 to R\$14,044 million for the year ended December 31, 2018. This was driven by the process of clients migrating between segments and within segments to higher-value offers. CGR expansion remains limited by a challenging macroeconomic environment in Brazil, characterized by slow economic recovery and a fiercer competitive environment among telecommunications companies. These elements impact in particular our prepaid recharge levels and, to a lesser extent, our ability to increase postpaid plan subscribers. Still, revenues generated by recurring offer packages increased 29.3% from the year ended December 31, 2017 and such packages now represent 77.1% of CGR (compared to 62.7% in 2017).

Interconnection revenue decreased 14.7% for the year ended December 31, 2018, with R\$712 million as compared to R\$835 million for the year ended December 31, 2017. The result remains impacted by the reduction of VU-M tariffs and declining growth of incoming traffic.

Other mobile revenue for the year ended December 31, 2018 was R\$598 million, an increase of 26.7% as compared to R\$472 million for the year ended December 31, 2017. This increase is explained by the current dynamic of network sharing contracts and swaps that generate additional mobile revenue, and which represent more than 50% of this line of revenue (and the corresponding network and interconnection costs in connection therewith).

The monthly average revenue per user, or ARPU, was R\$22.4 for the year ended December 31, 2018, an increase of 11.3% as compared to the year ended December 31, 2017. The main explanation for this increase in ARPU is the trend of subscribers migrating to higher-value plans, thereby improving our base mix of customers. ARPUs per segment, which exclude “non-TIM” client revenues and other mobile revenues, were slightly improved from the year ended December 31, 2017. ARPU for prepaid customers remained stable at R\$11.5 and ARPU for post-paid customers was R\$39.9 (an increase of 0.5% for the year ended December 31, 2018 as compared to the year ended December 31, 2017).

Landline service revenue increased 8.3%, to R\$852 million for the year ended December 31, 2018 as compared to R\$787 million the year ended December 31, 2017. This performance reflects the strong performance of TIM Live, more than offsetting the decline in revenues from other fixed segments (such as corporate and wholesale).

Goods Sold

Revenue from goods sold increased 2.0%, from R\$760 million for the year ended December 31, 2017 to R\$775 million for the year ended December 31, 2018, reflecting a better sales mix that contributed to a higher average price of handsets sold (an increase of 7.7% for the year ended December 31, 2018 as compared to the year ended December 31, 2017). This increase in revenue from goods sold occurred in spite of a 3.1% reduction in the overall volume of handsets sold in the year ended December 31, 2018 as compared to the year ended December 31, 2017.

Operating Costs and Expenses

Operating costs and expenses increased 1.9% for the year ended December 31, 2018 as compared to the year ended December 31, 2017.

The following table shows the components of operating costs and expenses for each of the periods indicated.

Statement of Operations Data: Operating Costs and Expenses

	Year ended December 31,		Percentage
	2018	2017	change
	(in millions of reais)		2018 – 2017
Personnel	(1,031.6)	(956.4)	7.9
Third-party services	(3,140.4)	(3,023.6)	3.9
Interconnection and means of connection	(2,513.2)	(2,632.6)	(4.5)
Depreciation and amortization	(3,954.3)	(4,013.7)	(1.5)
Taxes, fees and contributions	(916.3)	(967.6)	(5.3)
Rent and insurance	(805.5)	(764.9)	5.3
Cost of goods sold	(883.9)	(846.8)	4.4
Publicity and advertising	(421.6)	(411.0)	2.6
Losses on doubtful accounts	(544.9)	(316.4)	72.2
Others	(68.9)	(68.9)	0.0
Total operating expenses	(14,450.8)	(14,001.9)	3.2

Personnel

Personnel costs increased by 7.9% in the year ended December 31, 2018 as compared to the year ended December 31, 2017, to R\$1,032 million from R\$956 million, respectively. This increase can be explained by (i) inflation as compared to the previous year, which increased wages and benefits; (ii) a larger number of employees (an increase of 1.5% in the year ended December 31, 2018 as compared to the year ended December 31, 2017); (iii) a non-recurring cost resulting from the end of contracts of certain executives who left the company in the year ended December 31, 2018; (iv) re-composition of old pension plans; and (v) a revision of our labor contingency loss forecast related to our own employees.

Third-Party Services

Third-party services costs increased 3.9%, to R\$3,140 million in the year ended December 31, 2018 as compared to R\$3,024 million in the year ended December 31, 2017, mainly due to our increased postpaid sales resulting in a commensurate increase in commissioning expenses for such postpaid segment.

Interconnection and Means of Connection

Our costs for interconnection and means of connection decreased 4.5%, to R\$2,513 million in the year ended December 31, 2018 as compared to R\$2,633 million in the year ended December 31, 2017. This dynamic was influenced by lower interconnection costs, in particular (i) the decrease in the mobile termination rate (VU-M), (ii) reduced outgoing traffic to other operators and (iii) a reduction in costs relating to content providers. These positive effects more than offset the higher costs related to network elements and infrastructure sharing and rent.

Depreciation and Amortization

Depreciation and amortization expenses decreased by 1.5% in the year ended December 31, 2018 as compared to the year ended December 31, 2017, to R\$3,954 million from R\$4,014 million, respectively. This increase is explained mostly by a growth in the investment in software dedicated to the digitalization process and by the commencement of amortization related to our 700MHz license (which occurs once activated in certain cities).

Taxes, Fees and Contributions

Taxes, fees and contributions costs decreased by 5.3% in the year ended December 31, 2018, to R\$916 million from R\$968 million in the year ended December 31, 2017, mainly impacted by the decrease in FISTEL expenses.

Rental and Insurance

Rental and insurance costs increased 5.3% to R\$806 million in the year ended December 31, 2018 from R\$765 million in the year ended December 31, 2017. This increase is related to the impact from the trademark license agreement entered into in the year ended December 31, 2018 regarding the right to use the “TIM” brand.

Costs of Goods Sold

Our cost of goods sold increased by 4.4%, from R\$847 million in the year ended December 31, 2017 to R\$884 million in the year ended December 31, 2018. This increase is related to the increase, by 7.7% as compared with the year ended December 31, 2017, in the average selling price of handsets, which more than offset the 3.1% reduction of sales volume in the period as compared with the year ended December 31, 2017.

Publicity and Advertising

Publicity and advertising costs increased 2.6% in the year ended December 31, 2018 as compared to the year ended December 31, 2017, to R\$422 million from R\$411 million, respectively, mainly due to the launch of new campaigns related to our new offers in our different segments.

Losses on Doubtful Accounts

Losses on doubtful accounts, otherwise known as bad debt, increased 72.2%, to R\$545 million in the year ended December 31, 2018 as compared to R\$316 million the year ended December 31, 2017, explained by the continued

growth of revenues exposed to delinquency due to the growth in our postpaid customer base, as well as the impact of the adoption of IFRS 9 (Financial Instruments), as explained in Note 2.f of our consolidated financial statements presented herewith. Even with this increase, however, bad debt as a percentage of gross revenues remained under control at a level of 2% in the year ended December 31, 2018.

Others

Other costs remained stable in the year ended December 31, 2018 as compared to the year ended December 31, 2017. For the year ended December 31, 2018, those other costs amounted to R\$69 million, compared to R\$69 million for the year ended December 31, 2017.

Other Income (Expenses), Net

Other expenses, net, decreased 5.2% to R\$283 million in the year ended December 31, 2018 from R\$299 million in the year ended December 31, 2017. This decrease was due to a credit arising from a lawsuit filed by TIM Nordeste S.A. (ultimately merged into TIM S.A.) in which a final and unappealable decision was issued by the appeals court during the year ended December 31, 2018 in favor of the Company, in respect of the exclusion of the ICMS from the PIS and COFINS tax bases for the period from 2002 through 2009. For additional detail on this decision, see Note 28 to our consolidated financial statements.

Operating Income to Net Income

The following table shows our net income, as well as the percentage change, for each of the periods indicated:

Statement of Operations Data: Net Income

	Year ended December 31,		Percentage
	2018	2017	change
	(in millions of reais)		2018 – 2017
Operating income	2,417.5	1,933.4	25.0
Financial income (expenses)	(537.3)	(497.8)	7.9
Income and social contribution taxes	664.9	(201.0)	n.a.
Net income for the year.	2,545.1	1,234.6	106.1

Financial Income (Expenses)

In the year ended December 31, 2018, financial expenses were R\$537 million, an increase of 7.9% as compared to the R\$498 million in financial expenses in the year ended December 31, 2017.

Income and Social Contribution Taxes

Income and social contribution taxes are calculated based on the separate income of each subsidiary, adjusted by the additions and exclusions permitted in the year ended December 31, 2018 in accordance with tax law. Income tax and social contribution was R\$665 million in the year ended December 31, 2018, an increase as compared with a net expense of R\$201 million in the year ended December 31, 2017, mainly explained by the impact of the merger of TIM Celular into TIM S.A. in 2018, which generated a tax credit of R\$952 million.

Net Income for the Year

As a consequence of all of the dynamics explained above, our net income in the year ended December 31, 2018 was R\$2,545 million, representing an increase of 106.1% from a net income of R\$1,235 million in the year ended December 31, 2017.

Results of Operations for the Year Ended December 31, 2017 Compared to the Year Ended December 31, 2016

Operating Revenues

Our operating revenues consisted of:

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- Mobile and Fixed Services: (i) local and long distance voice, (ii) data and content (Value-Added Services), (iii) interconnection, and (iv) other services.
- Product Revenue: sale of handsets and accessories.

The composition of our operating revenues by category of service is presented in Note 27 to our consolidated financial statements and discussed below. We do not determine net operating revenues or allocate cost by category of service.

The following table shows the breakdown of our operating revenue, as well as the percentage change of each component from the prior year, for each of 2017 and 2016:

Statement of Operations Data: Operating Revenues

	Year ended December 31,		Percentage
	2017	2016	change
	(in millions of reais)		2017 – 2016
Gross operating revenue	22,611.1	22,745.6	(0.6)
Deductions from gross revenue	(6,377.1)	(7,128.2)	(10.5)
Total revenue	16,234.0	15,617.4	3.9

Our gross operating revenue was R\$22,611 million for the year ended December 31, 2017, representing a loss of 0.6% as compared to our gross operating revenue of R\$22,746 million for the year ended December 31, 2016. This slight loss was mainly due to the recovery of mobile service revenue, which decreased by 0.2% compared to the year ended December 31, 2016, but which had decreased by 8.7% for the year ended December 31, 2016 compared to the year ended December 31, 2015, and by the increase in the landline service revenue, which increased by 9.1% compared to the year ended December 31, 2016. The revenue from goods sold slowed the pace at which it decreased, down by 14.5% compared to the year ended December 31, 2016, while the decrease for the year ended December 31, 2016 as compared to the year ended December 31, 2015, was 47.9%.

Deductions from gross revenue for the year ended December 31, 2017 was R\$6,377 million, a decrease of 10.5% compared to the year ended December 31, 2016, which was R\$7,128 million. This dynamic is explained by the reduction in the discounts offered and by the greater concentration of consumption of services with lower taxation.

Our revenue for the year ended December 31, 2017 was R\$16,234 million, an increase of 3.9% as compared to the year ended December 31, 2016. Net mobile service revenue increased 5.1% for the year ended December 31, 2017 as compared to the year ended December 31, 2016, from R\$13,968 million in the year ended December 31, 2016 to R\$14,687 million in the year ended December 31, 2017. The main driver of this dynamic is the solid expansion in data and content revenue, which more than compensated for the negative impact of the reduction of demand for voice service, the regulatory reduction in the interconnection fee (VU-M) and a Brazilian macroeconomic environment which was still recovering. Net landline service revenue increased by 4.7%, to R\$787 million for the year ended December 31, 2017 from R\$752 million for the year ended December 31, 2016, mainly explained by the TIM Live expansion.

The Company's management understands that a breakdown of net revenue can be helpful in an analysis of the Company's revenue dynamics. The details of net revenue and the main highlights are presented below:

Revenue Breakdown

	Year ended December 31,		Percentage
	2017	2016	change
	(in millions of reais)		2017 – 2016
Total revenue	16,234.0	15,617.43.9	
Service revenue	15,474.1	14,720.3	5.1
Service revenue – mobile	14,687.1	13,968.5	5.1
Client generated.	13,379.6	12,557.6	6.5
Interconnection	835.2	1,061.0	(21.3)
Others	472.3	349.9	35.0
Service revenue – landline	787.1	751.8	4.7
Goods sold.	759.8	897.2	(15.3)

Service Revenue

Service revenue for the year ended December 31, 2017 was R\$15,474 million, an increase of 5.1% compared to R\$14,720 million in the year ended December 31, 2016, and demonstrated the trend of recovery in mobile and landline segments. Revenue from mobile services, or MSR, performed similarly, increasing 5.1% to R\$14,687 million for the year ended December 31, 2017, from R\$13,968 million for the year ended December 31, 2016, due to the strong expansion of Value-Added Services.

Client generated revenue, or CGR, which consists local voice, long distance voice and data and content revenue, increased by 6.5%, from R\$12,558 million for the year ended December 31, 2016 to R\$13,380 million for the year ended December 31, 2017, driven by an increase in revenue from Value-Added Services, which reflects the increased customer demand for data and content services.

Local voice revenue decreased 23.8%, R\$3,725 million for the year ended December 31, 2017 as compared to R\$4,891 million for the year ended December 31, 2016. Long distance voice revenue decreased by 25.8% for the year ended December 31, 2017, to R\$1,050 million as compared to R\$1,416 million for the year ended December 31, 2016. The decrease in both local voice revenue and long distance voice revenue are explained by voice-to-data migration as we introduce more data and content services into our voice and data combination packages.

The dynamics of changes to voice revenue is reflected in the monthly average minutes of use by customers, or MOU, per month totaled 110 minutes, which represents a decrease of 5.8% for the year ended December 31, 2017 as compared to the year ended December 31, 2016, and which is a result of the national change in the customer profile, as our customers migrate from heavier voice usage to greater reliance on data.

Data and content revenue for the year ended December 31, 2017 was R\$8,604 million, an increase of 37.7% for the year ended December 31, 2017 as compared to R\$6,250 million for the year ended December 31, 2016 and represented 58.6% of MSR. This can be explained by the Company's strategy of offering more packages with recurring offers and content incorporated into these offers.

The dynamics of changes to data demand are reflected in the average customer's bytes of use, or BOU, per month, measured through November, increased by nearly 95% compared to the previous year, explained by increased plan offerings with expanded data and our efforts to migrate customers to 4G and boost smartphone penetration using this technology.

Interconnection revenue decreased 21.3% for the year ended December 31, 2017, with R\$835 million as compared to R\$1,061 million for the year ended December 31, 2016. The increase in incoming traffic was not enough to compensate for the effects of the regulatory decrease in the VU-M mobile termination rate (see “Item 4. Information on the Company—B. Business Overview—Regulation of the Brazilian Telecommunications Industry—Interconnection Regulation” for information regarding recent regulatory changes to VU-M rates).

Other mobile revenue for the year ended December 31, 2017 was R\$472 million, an increase of 35.0% as compared to R\$350 million for the year ended December 31, 2016. This increase is explained by the current dynamic of network sharing contracts and swaps that generate revenue, representing more than 50% of this line of revenue (and the corresponding network and interconnection costs).

The monthly average revenue per user, or ARPU, was R\$20.2 for the year ended December 31, 2017, an increase of 12.1% as compared to the year ended December 31, 2016. The increase in ARPU is explained mainly by the improvement in our base mix of customers, with a greater proportion of postpaid customers, and also by the individual growth of each segment.

Landline service revenue rose 4.7%, at R\$787 million for the year ended December 31, 2017 as compared to R\$752 million the year ended December 31, 2016. This increase was driven by the growth and expansion of coverage of TIM Live and which accounted for 44.6% of the increase in net revenue as compared to the year ended December 31, 2016. With the expansion of coverage, the contribution of TIM Live to fixed service revenue has increased from 35% of total fixed service revenue for the year ended December 31, 2017 as compared to 25% for the year ended December 31, 2016.

Goods Sold

Revenue from goods sold decreased 15.3%, from R\$897 million for the year ended December 31, 2016 to R\$760 million for the year ended December 31, 2017, explained by the reduction in the number of devices sold and the lower average price per device. Despite the decrease, the pace of deceleration was lower as compared to the variations of previous years. The penetration of smartphones for the year ended December 31, 2017 reached 80.9% compared to 72.8% for the year ended December 31, 2016.

Operating Costs and Expenses

Operating costs and expenses remained under control and ended 2017 relatively flat, with an increase of 0.5% for the year ended December 31, 2017 as compared to the year ended December 31, 2016, despite the growth of the postpaid base and the continuous expansion of our network, which come with associated costs.

The following table shows the components of operating costs and expenses for each of the periods indicated.

Statement of Operations Data: Operating Costs and Expenses

	Year ended December 31,		Percentage
	2017	2016	change
	(in millions of reais)		2017 – 2016
Personnel	(956.4)	(1,005.3)	(4.9)
Third-party services	(3,023.6)	(2,905.1)	4.1
Interconnection and means of connection	(2,632.6)	(2,676.8)	(1.7)
Depreciation and amortization	(3,751.7)	(3,512.1)	6.8
Taxes, fees and contributions	(967.6)	(1,094.5)	(11.6)
Rent and insurance	(764.9)	(725.0)	5.5
Cost of goods sold	(846.8)	(976.0)	(13.2)
Publicity and advertising	(411.0)	(438.8)	(6.3)
Losses on doubtful accounts	(316.4)	(266.4)	18.7
Others	(68.9)	(71.1)	(2.2)

Total operating expenses	(13,740.0)	(13,671.2)	0.5
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Personnel

Personnel costs decreased by 4.9% in the year ended December 31, 2017 as compared to the year ended December 31, 2016, to R\$956 million from R\$1,005 million, respectively. This decrease can be explained by the non-recurring effects and adjustments for organizational rightsizing occurred in 2016. The reduction in our employee base to 9,519 employees in 2017 from 12,294 employees in 2016 also contributed to this decrease.

Third-Party Services

Third-party services costs increased 4.1%, to R\$3,024 million in the year ended December 31, 2017 as compared to R\$2,905 million in the year ended December 31, 2016, mainly due to increased costs from outside providers in connection with maintaining our expanding network infrastructure. Additionally, our increased postpaid sales resulted in a commensurate increase in commissioning expenses and other customer management expenses (such as billing, collection and customer care).

Interconnection and Means of Connection

Our costs for interconnection and means of connection decreased 1.7%, to R\$2,633 million in the year ended December 31, 2017 as compared to R\$2,677 million in the year ended December 31, 2016. This dynamic is related to the decrease in the VU-M interconnection fee and lower costs for leased lines as a result of Anatel Resolution No. 639 and an overall reduction in the number lines due to the Zero Leased Lines project.

Depreciation and Amortization

Depreciation and amortization expenses increased by 6.8% in the year ended December 31, 2017 as compared to the year ended December 31, 2016, to R\$3,752 million from R\$3,512 million, respectively. This increase is explained by a greater number of construction works in progress and a greater investment in software.

Taxes, Fees and Contributions

Taxes, fees and contributions costs decreased by 11.6% in the year ended December 31, 2017, to R\$968 million from R\$1,094 million in the year ended December 31, 2016, impacted by the decrease in FISTEL expenses.

Rental and Insurance

Rental and insurance costs increased 5.5% to R\$765 million in the year ended December 31, 2017 from R\$725 million in the year ended December 31, 2016. This increase is related to our network expansion, which increased our costs related to land leasing and infrastructure sharing.

Costs of Goods Sold

Our cost of goods sold continued to reduce its pace of decline as compared to previous years, decreasing by 13.2%, from R\$976 million in the year ended December 31, 2016 to R\$847 million in the year ended December 31, 2017. It was impacted by the decrease, by 12.6% in the year ended December 31, 2017 as compared to the year ended December 31, 2016, in the number of devices sold, and also by the lower average selling price for devices, which decreased by 1.7% in the year ended December 31, 2017 as compared to the year ended December 31, 2016. The reduction in the average device sales price is a result of a change in the strategy of suppliers to deliver higher quality equipment at more affordable prices. The Company continues to develop its product sales mix toward high-value devices, with sales volumes migrating from the prepaid segment and concentrating on postpaid and Control segments.

Publicity and Advertising

Publicity and advertising costs decreased 6.3% in the year ended December 31, 2017 as compared to the year ended December 31, 2016, to R\$411 million from R\$439 million, respectively, impacted by the decrease in prepaid recharge fees and efficiencies on our advertising spending mix.

Losses on Doubtful Accounts

Losses on doubtful accounts, or Bad Debt, increased 18.7%, to R\$316 million in the year ended December 31, 2017 as compared to R\$266 million the year ended December 31, 2016, following the continued growth in our postpaid customer base and revenue. Despite this increase, Bad Debt remains under control as a percentage of our gross revenue, at 1.4%.

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Others

Other costs decreased 3.1%, or R\$2 million, in the year ended December 31, 2017 as compared to the year ended December 31, 2016. For the year ended December 31, 2017, those other costs amounted to R\$69 million, compared to R\$71 million for the year ended December 31, 2016.

Other Income (Expenses), Net

Other expenses, net increased 7.4% to R\$561 million in the year ended December 31, 2017 from R\$522 million in the year ended December 31, 2016. This increase was mainly explained by changes in the comparative base, which in 2016 included more transfers of towers to ATC as revenues from the disposal of assets. See Note 29 to our consolidated financial statements.

Operating Income to Net Income

The following table shows our net income, as well as the percentage change, for each of the periods indicated:

Statement of Operations Data: Net Income

	Year ended December 31,		Percentage
	2017	2016	change
	(in millions of reais)		2017 – 2016
Operating income.	1,933.4	1,424.2	35.8
Financial income (expenses)	(497.8)	(410.9)	21.2
Income and social contribution taxes	(201.0)	(262.9)	(23.5)
Net income for the year	1,234.6	750.3	64.5

Financial Income (Expenses)

In the year ended December 31, 2017, financial expenses were R\$498 million, an increase of 21.2% as compared to the R\$411 million in financial expenses in the year ended December 31, 2016, explained by a positive derivatives mark-to-market effect that occurred in 2016.

Income and Social Contribution Taxes

Income and social contribution taxes are calculated based on the separate income of each subsidiary, adjusted by the additions and exclusions permitted in the year ended December 31, 2017 under tax law. Income tax and social contribution was R\$201 million in the year ended December 31, 2017, a decrease of 23.5% as compared R\$263 million to the year ended December 31, 2016, mainly explained by the deduction of a R\$190 million payment of Interest on Equity in November 2017. The effective rate of income and social contribution taxes was 14.0% in 2017 as compared to 25.9% in 2016.

Net Income for the Year

As a consequence of all of the dynamics explained above, our net income in the year ended December 31, 2017 was R\$1,235 million, representing an increase of 64.5% from a net income of R\$750 million in the year ended December

31, 2016.

B. *Liquidity and Capital Resources*

The main source of our liquidity for net working capital and investment is operating cash flow, complemented by short-term credit lines with local and international banks and long-term financing with national and international development agencies.

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Since the cost to us of our debts has been increasing due to the macroeconomic conditions of Brazil and related to interest rate dynamics, resulting in a narrowing positive carry with a potential to turn into a negative carry, the Company decided in 2018 to reduce indebtedness by prepaying a significant amount thereof. In 2018, we prepaid R\$2.2 billion in existing indebtedness with our own cash, reducing gross debt by 48.2%. In order to partially recompose our cash position, we approved the issuance of R\$1.0 billion of debentures by TIM S.A. offered through a public placement with restricted efforts in accordance with CVM Instruction 476, which was disbursed in January 2019. The net proceeds from such issuance are expected to be used for working capital.

Until 2020, we expect to finance our ordinary capital expenditures and other ordinary liquidity requirements with our cash and operating revenue. We believe that our current working capital is sufficient for our present requirements.

Sources of Funds

Cash from operations

Our cash flows from operating activities was R\$6,129 million in the year ended December 31, 2018 compared to R\$5,404 million in the year ended December 31, 2017, an increase of 13.4% mainly explained by an increase in our EBITDA and a decrease in our capital expenditures.

We had other significant variations in our operational assets and liabilities, which affected our cash from operations. The main variations of assets and liabilities were:

Positives

- Authorizations payable decreased to R\$104,582 in the year ended December 31, 2018, compared to R\$895,964 in the year ended December 31, 2017.
- Tax, charges and contributions decreased to R\$26,786 in the year ended December 31, 2018, compared to R\$474,557 in the year ended December 31, 2017.
- Prepaid expenses increased to R\$56,792 in the year ended December 31, 2018, compared to a negative variation of R\$40,490 in the year ended December 31, 2017.

Negatives

- Trade accounts receivable decreased to R\$1,028,791 in the year ended December 31, 2018, compared to a positive variation of R\$99,674 in the year ended December 31, 2017.
- Suppliers decreased to R\$331,736 in the year ended December 31, 2018, compared to R\$523,419 in the year ended December 31, 2017.

Financial Contracts

We and our subsidiaries are party to the financial contracts described below, each to be used for purposes of the development of our business, generally, unless otherwise expressly provided herein. With respect to loans denominated in currencies other than *reais*, we enter into currency swaps to hedge against exchange rate fluctuations.

In 2018, TIM S.A. obtained new loans totaling R\$167 million related to existing financial agreements, as set forth below and as each agreement is described further in the following paragraph. In January 2019, TIM S.A. issued R\$1.0

billion in debentures (offered through a public placement with restricted efforts in accordance with CVM Instruction 476). In March 2019, we also entered into, but did not disburse, a R\$390 million credit agreement with Agência Especial de Financiamento Industrial S.A. – FINAME for purposes of the acquisition of new machines, equipment, industrial systems, components and automation and computing goods of national manufacture. This FINAME facility replaced one of the sub-credits of a BNDES financing we entered into during 2018.

The terms of our long-term debt contain cross-default clauses, restrictions on our ability to merge with another entity, restrictions on our ability to prematurely redeem or repay such debt and restrictions on sales and exchanges of assets. They also contain various financial ratio covenants. We are currently not, and do not expect to be, in breach of any material covenant of our debt instruments, which breach would be construed an event of default under their terms.

As mentioned above, our principal financing agreements are:

- Credit Agreement, dated as of November 19, 2008, amended on December 12, 2008, June 29, 2010, and December 10, 2012, among BNDES, as lender and TIM Celular (now TIM S.A.) and Intelig (each now known as or merged into TIM S.A.), as borrowers, and TIM Participações as guarantor, in the principal amount of R\$3,674 million (a R\$2,164 million increase in the credit limit was effected by way of amendment on December 10, 2012). The agreement, which matures on December 15, 2019 bears interest at either (1) a fixed rate of 3.32% plus the TJLP; (2) TJLP or (3) fixed interest rate of 2.5% per annum. As of December 31 2018, the outstanding debt of TIM S.A. under this credit agreement, including accrued interest, was R\$280 million.
- Master Loan Agreement, dated as of June 20, 2013, between Cisco Capital, as lender, TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization), as borrower. The purpose of the loan is to finance TIM Celular (now TIM S.A.)'s purchase of Cisco and third-party products and services. The loan to be given pursuant to the Master Loan Agreement was executed pursuant to the following Facility Agreements: (1) a new Facility Agreement dated October 14, 2014, between Cisco Capital, as lender, and TIM Celular (now TIM S.A.), as borrower, in the total principal amount of U.S.\$50 million (fully disbursed on November 5, 2014); and (2) a new Facility Agreement dated November 18, 2015, between Cisco Capital, as lender and TIM Celular (now TIM S.A.), as borrower in the total principal amount of U.S.\$50 million (fully disbursed on December 15, 2015). The total outstanding amount as of December 31, 2018 converted from U.S. dollars was R\$116 million, including accrued interest. The first agreement matures in November 2019 and bears an average cost of 91.90% of the CDI after hedging and the second agreement matures in December 2020 and bears an average cost of 84.50% of the CDI after hedging. No guarantees were issued under this loan.
- Credit Agreement, dated as of December 23, 2013, between BNDES, as lender and TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization), as borrower, and TIM Participações as guarantor, in the principal amount of R\$5,700 million. The agreement, involves six credit lines, each of which has different conditions, interest rates and tenors: (1) Credit Line A, in an amount of R\$2,401 million, a fixed interest rate of 2.52% plus the TJLP and eight years tenor; (2) Credit Line B, in an amount of R\$600.4 million, a fixed interest rate of 2.52% plus the SELIC and eight years tenor; (3) Credit Line C, in an amount of R\$2,036 million, a fixed interest rate of 2.52% plus the SELIC and eight years tenor; (4) Credit Line D, in an amount of R\$428 million, a fixed interest rate of 3.50% and seven years tenor; (5) Credit Line E, in an amount of R\$189 million, a fixed interest rate of 1.42% plus the TJLP and eight years tenor; and (6) Credit Line F, in an amount of R\$45 million, an interest rate of TJLP and eight years tenor. Each credit line is to be used for specific purposes as set forth in the Credit Agreement. Due to the interest rate dynamics in Brazil and strong cash flow, the Company prepaid R\$800 million of this loan in December 2017 and a total of R\$2.2 billion in 2018; these prepayments reduced our monthly installment payments under the Credit Agreement but the maturity date remains the same (2022). Because of that, the total outstanding amount under this credit agreement, including accrued interest, was R\$845 million as of December 31, 2018.
- Loan Agreement, dated as of April 15, 2014, between KfW IPEX as lender, TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization), as borrower and TIM Participações as guarantor, in the principal amount of U.S.\$100 million. The total outstanding amount as of December 31, 2018 converted from U.S. dollars was R\$43 million, including accrued interest. The agreement matures on April 15, 2019 and bears an average cost of 102.50% of the CDI after hedging. No guarantees were issued under this loan.

- Loan Agreement, dated as of December 23, 2015, between Finnish Export Credit as lender, KfW IPEX as facility agent, TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization), as borrower and TIM Participações as guarantor, in the principal amount of U.S.\$150 million. The new Loan Agreement is divided in three tranches of up to U.S.\$50 million to be disbursed in 2016, 2017 and 2018. On April 20, 2016, the first tranche of U.S.\$45 million was disbursed and it has an average cost of 79% of the CDI after hedging. The second tranche of U.S.\$48 million was disbursed on April 20, 2017 and it has an average cost of 81.5% after hedging and the third tranche of U.S.\$40 million was disbursed on September 17, 2018 and it has an average cost of 92.59% after hedging. On August 24, 2018, we requested the partial cancellation of U.S.\$5.1 million (or U.S.\$11.1 million if considered the regular reductions of total amount thereunder). As of December 31, 2018, the total outstanding amount under this credit agreement, converted from U.S. dollars and including accrued interest, was R\$379 million and there will be no more disbursements. The agreements mature on January 2, 2024, December 31, 2024 and December 30, 2025, respectively.
- Credit Agreement, dated as of May 2, 2018, between BNDES as lender and TIM Celular (now TIM S.A.) as borrower, and TIM Participações as guarantor (the “2018 BNDES Facility”), in the principal amount of R\$1,500 million. The agreement, involves three credit lines with equal conditions of interest rates and tenors: (1) Credit Line A, in an amount of R\$1,090 million, with a fixed interest rate of 1.95% plus the TJLP and eight years tenor; (2) Credit Line B, in an amount of R\$390 million, with a fixed interest rate of 1.95% plus the TJLP and eight years tenor; and (3) Credit Line C, in an amount of R\$20 million, with a fixed interest rate of 1.95% plus the TJLP and eight years tenor. Each credit line is to be used for specific purposes as set forth in the Credit Agreement and there were no disbursements on 2018 or 2019. In March 2019, Credit Line B was canceled and replaced by FINAME DIRETO (as defined below).
- Credit Agreement, dated March 20, 2019, between Agência Especial de Financiamento Industrial S.A. – FINAME, an entity within the BNDES system, as lender and TIM S.A. as borrower, in the principal amount of R\$390 million for exclusive use in the acquisition of new machines, equipment, industrial systems, components and automation and computing goods of national manufacture, accredited by the Credenciamento de Fornecedor Informatizado – CFI of the BNDES system (“FINAME DIRETO”). The new agreement replaces one of the sub-credits (Credit Line B) of the existing 2018 BNDES Facility with better interest rate and tenor conditions: a fixed interest rate up to 1.44% plus the TLP and tenor up to 16 years. There were no additional costs to sign this loan and there were no disbursements in 2019.
- Deed of Indenture for the Issuance of Simple Unsubordinated Debentures, with Additional Personal Guarantee, Not Convertible into Shares, in a Single Series, for Public Placement with Limited Efforts of the First Issuance of TIM S.A. (“*Instrumento Particular de Escritura de Emissão de Debêntures Simples, da Espécie Quirografária com Garantia Adicional Fidejussória, não Conversíveis em Ações, em Série Única, para Distribuição Pública com Esforços Restritos da Primeira Emissão da Tim S.A.*”), dated as of January 9, 2019, between TIM S.A., as issuer, Simplific Pavarini Distribuidora de Títulos e Valores Mobiliários Ltda., as fiduciary agent, and TIM Participações S.A., as guarantor. The total amount of the issuance was R\$1,000,000,000 through the issuance of 100,000 debentures each with a nominal value of R\$10,000 on the issuance date and in a single series. The debentures are non-convertible and unsubordinated with an additional personal guarantee. For all legal purposes, the issuance date is January 15, 2019 and the term of the debentures is of 18 months as from the issuance date, or July 15, 2020.

See Note 19 in our consolidated financial statements for a further description of such financing agreements.

Funds From Subsidiaries

There are no material restrictions on the ability of our subsidiaries to transfer funds to the Company in the form of cash dividends, loans or advances.

Uses of Funds

Our principal uses of funds during the three-year period ended December 31, 2018, were capital expenditures, payment of dividends to our shareholders and loan repayments.

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Material Capital Expenditures

Our capital expenditures in 2018, 2017 and 2016 related primarily to: (i) developing our fiber optic network, (ii) deployment and expansion of the capacity of our third and fourth generation (3G and 4G) networks, (iii) expanding network capacity, geographic coverage and digitalization, (iv) maintenance of our networks and IT systems, (v) purchases of equipment relating to our migration to PCS operations, and (vi) developing new operational and information technology systems.

The following table contains a breakdown of our investments in fixed assets for the years ended December 31, 2018, 2017 and 2016:

Capital Expenditures Categories

	Year ended December 31,		
	2018	2017	2016
	(in millions of reais)		
Network	2,732.3	2,904.6	2,916.1
Information technology	720.6	717.8	888.6
Licenses	98.9	69.1	196.5
Other	425.3	456.4	501.2
Total capital expenditures	3,977.2	4,147.9	4,502.4

See “Item 4. Information on the Company—A. History and Development of the Company—Capital Expenditures.”

Dividends

Our dividends are calculated in accordance with our Bylaws and Brazilian corporate law. Under our Bylaws, we are required to distribute an aggregate amount equal to at least 25% of our adjusted net income to our shareholders, either as dividends or as tax-deductible interest on shareholders’ equity, each year ended December 31, provided that there are funds available for distribution.

For the purposes of the Brazilian corporate law and in accordance with our Bylaws, “adjusted net income” is the amount equal to the net profit adjusted to reflect allocations to or from: (1) the legal reserve, and (2) a contingency reserve for probable losses, if applicable.

The following table contains a breakdown of the dividends and interest on shareholders’ equity actually paid (net of income taxes) by us to our shareholders during the years ended December 31, 2018, 2017 and 2016:

Dividend Distribution

	Year ended December 31,		
	2018	2017	2016
	(in millions of reais)		
Dividends	—	103.3	148.7
Interest on shareholders’ equity (net of withholding tax)	724.2	161.7	—
Total distributions	724.2	265.1	148.7

In March 2019, our shareholders voted to approve the distribution of R\$724.2 million as Interest on Shareholders' Equity in accordance of the minimum required on Brazilian Law, with respect to our 2018 results, which were already paid-out in 2018. The amounts indicated in the table above for 2017 and 2016 were approved at the annual general meeting in 2018 and 2017, respectively.

Funding and Treasury Policies

The Company maintains a general policy of continually monitoring its financial position and treasury activities in order to ensure solid fiscal control. As a result of our (1) strong cash position, (2) leverage ratio of 0.23 Net Debt to EBITDA (for additional detail, see “—Leverage” below), the Company does not foresee any funding needs until 2020. However, in accordance with our funding and treasury policy, the Company will continue to monitor new financing opportunities with a particular focus on soft loans, or loans with a below-market interest rate, and long-term facilities.

Leverage

Management tracks the ratio of net debt to EBITDA, which we refer to as the financial leverage index, in order to monitor the sustainability of our debt levels and our ability to take on additional debt. The ratio is a common credit analysis metric in the telecommunications industry and shows approximately how many years it would take to pay back our indebtedness, assuming no new debt is taken on, EBITDA remains constant and all cash and cash equivalents may be used to repay debt. In addition, we believe that the ability to take on additional debt is a critical factor affecting success, as indebtedness may be required to make investments necessary to grow the Company’s business. We believe that our current financial leverage index, Net Debt to EBITDA, reflects conservative leverage levels and the ability to incur additional debt if needed for extraordinary investment. Investors should be cautious in comparing our financial leverage index to that of other companies that report a similar ratio of debt to EBITDA because EBITDA in particular may be calculated differently from company to company, leading to financial leverage indices that are not comparable. Accordingly, any such comparison may be misleading.

The following table sets forth our financial leverage index for the reported periods:

	2018	2017
	(in millions of reais)	
Total borrowing and derivatives (Notes 19 and 36)	1,593	4,643
Leasing – Liabilities (Note 15)	1,940	1,887
Leasing – Assets (Note 15)	(208)	(205)
Less: Cash and cash equivalents (Note 4)	(1,076)	(2,961)
FIC (Investment Fund in Units) (Note 5)	(785)	(766)
Net debt	1,465	2,697
EBITDA	6,372	5,947
Financial leverage index	0.23	0.45

A reconciliation of our net income to EBITDA, as well as a further explanation of the calculation of our financial leverage index, is also presented in Note 36 to our consolidated financial statements.

We believe that using EBITDA as a non-GAAP measure is useful to management, investors and other users of our financial information in evaluating operating profitability on a more variable cost basis as they exclude the depreciation and amortization expense related primarily to capital expenditures and acquisitions that occurred in prior years, as well as in evaluating operating performance in relation to TIM’s competitors. EBITDA is calculated by adding back interest, taxes, depreciation and amortization expense to net income.

C. Research and Development

Research and Development

We do not independently develop new telecommunications hardware and depend upon the manufacturers of telecommunications products for the development of new hardware.

Patents and Licenses

We hold no material intellectual property assets. Telecom Italia owns the rights to the “TIM” trade name, which is currently licensed to us.

D. Trend Information

Customer Base and Market Share

In the year ended December 31, 2018, our subscriber base decreased 4.6% to 55.9 million customers, which represented a market share of 24.4%, compared to 58.6 million customers and 24.8% of market share in 2017. This overall subscriber base reduction was a result of a significant decrease in the number of prepaid customers in the Brazilian mobile telecommunications market, generally, as most of our disconnections were of prepaid plans. Prepaid plan users concentrate the lower-middle socioeconomic classes of Brazil, as defined by the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística*). These users are particularly affected by macroeconomic pressures in Brazil, accelerating the number of users consolidating multiple SIM cards to a single one, the high penetration of mobile service and the rapid substitution of voice for data usage, resulting in a decrease in the “community effect.”

With respect to the composition of our customer base, the postpaid segment accounted for 36.2% of our total subscriber base in the year ended December 31, 2018, compared to 30.4% from a year ago, due to (i) customers’ migration from prepaid to postpaid (mainly via our Control plans), (ii) number portability (migration from one to another operator) and (iii) the stabilization of the churn rate. The prepaid segment represents 63.8% of our customer base at the end of 2018, 5.8 percentage points lower than 2017, impacted by the “cleaning” actions in the prepaid segment where customers who previously held multiple SIM cards are discarding or consolidating them and migrating to our Control segment.

Although no assurances can be given as to the size of our subscriber base and market share in the future, we intend to focus on maintaining and improving our strong position in the mobile and fixed telecommunications market in Brazil. Our strategies for doing so are outlined in more detail in “Item 4. Information on the Company —B. Business Overview—Our Strategy.”

Trends in Sales and Prices

The volume of unit sales continues to decrease due to a slow recovery of economic conditions, which limits consumer purchasing power, the decrease in our customer base overall, and the trend of customers seeking greater value over high volume. We will continue to monetize our customer base using the strategy of “more for more” and focus on the development of all of our business lines.

Under our PCS authorizations, we are allowed to set prices for our service plans, subject to approval by Anatel, provided that such amounts do not exceed a specified inflation adjusted cap. We expect that the adjustment of our prices will follow the market trend. The rates for our service plans, as well as a description of the main features of such plans, are set out in “Item 4. Information on the Company—B. Business Overview—Mobile Service Rates and Plans.”

Monthly Average Revenue Per User (ARPU)

TIM’s ARPU was R\$22.4 in the year ended December 31, 2018, an increase of 11.3% when compared to an ARPU of R\$20.2 for the year ended December 31, 2017, largely due to the improvement in the composition of our customer base with more postpaid and also by the individual growth of each segment.

Competitive Environment

Brazil’s telecommunication market is in a mature stage and is subject to a competitive landscape that is almost unique in the world. This market has grown at a faster pace compared to other sectors of the economy. Brazil is one of the

few markets with four nationwide competitors, each with a market share between 16% and 32%, which TIM believes, acts as the driver of growth and for the development of differentiated and quality services at fair and competitive prices.

In 2018, amid this competitive landscape, our subscriber acquisition costs, or SAC, (which are comprised of a subsidy, commissions and total advertising expenses) amounted to R\$46.4 per gross add for the year ended December 31, 2018, compared to R\$39.6 in the year ended December 31, 2017. The increase of 17.1% year over year is primarily due to higher commissioning expenses (postpaid users reflected an increased proportion of our gross additions) and to the increase in loyalty offers (discounted device offers). Despite the increase in SAC, the SAC to ARPU ratio, which indicates the return per client, remained at a healthy level of 2.1 months in 2018.

In addition to competition from other traditional mobile telecommunications service providers, the level of competition from fixed-line service providers has increased, and it is possible it will continue to increase, as fixed-line service providers attempt to attract subscribers away from mobile service based on price and package offers that bundle multiple applications such as voice services (mobile and fixed-line), broadband and other services. Technological changes in the telecommunications field, such as the rapid development of fourth generation (LTE) and its derivations (Advanced LTE and others) after the consolidation of third generation in recent years, the increasing use of number portability and in the next few years, the development of the fifth generation are expected to introduce additional sources of competition. It is also expected that Anatel will auction licenses to provide mobile telecommunications services over additional bandwidth frequencies to accommodate these emerging technologies.

E. Off-Balance Sheet Arrangements

The equipment and property rental agreements signed by the Company and its subsidiaries have different maturity dates. Below is a list of minimum rental payments to be made under such off-balance sheet agreements:

Maturity	Amount (in millions of reais)
2019	1,089
2020	1,132
2021	1,177
2022	1,224
2023	1,274
Total	5,896

F. Tabular Disclosure of Contractual Obligations

The following table shows our contractual obligations and commercial commitments as of December 31, 2018:

Payments due by Period (in millions of reais)

	Total	Less than 1 year	1-3 years	4-5 years	More than 5 years
Total borrowings (post hedge) ⁽¹⁾	1,593	650	627	224	92
Finance leases ⁽²⁾	1,732	179	199	162	1,193
Total⁽³⁾	3,325	829	826	386	1,285

(1) Considering the balances related to derivative financial instruments as of December 31, 2018.

(2) The information regarding payments due by period under our finance leases reflects future payments due that are non-cancelable without payment of a related penalty.

(3) Other than as set forth herein (see, for example, Item 4. Information on the Company—B. Business Overview—Our Business), we have no capital lease obligations, unconditional purchase obligations, or other long-term liabilities reflected on our balance sheet of our primary financial statements. Interest is not included in long-term debt since it is subject to variable interest.

Contingent Pension Liabilities

Until December 1999, we participated in a multi-employer defined benefit plan, or the Telebrás Pension Plan, that covered the employees of the Telebrás System who retired before the Breakup as well as those who continued working for the operating companies after the Breakup. We are contingently liable, jointly and severally, with the other New Holding Companies, for the unfunded obligations of the Telebrás Pension Plan with respect to all such employees who retired before January 30, 2000. In December 1999, we changed to a defined benefit plan, or the PBS Plan, that covers only those former employees of Telebrás who continued to be employed by us after December 1999.

In November 2002, we created a separate defined contribution plan, or the TIMPREV Pension Plan. Migration to this plan was optional for employees linked to the PBS Plan. Migration to the TIMPREV Pension Plan extinguishes the migrating participant's rights under the PBS Plan.

SISTEL and TIMPREV

The Company and TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization) have sponsored a private defined benefit pension plan for a group of Telebrás system's former employees, which is managed by Fundação Sistel de Seguridade Social – SISTEL, as a consequence of the legal provisions applicable to the privatization process of these companies in July 1998.

Given that in 1999 and 2000 the sponsors of the pension plans managed by SISTEL had already negotiated conditions for the creation of individual pension plans for each sponsoring company and the maintenance of joint liability only in relation to the participants already assisted on January 31, 2000, the Company and its subsidiaries, like other companies created as a result of the former Telebrás system, created in 2002 the TIMPREV Pension Plan, a defined contribution pension plan meeting the most modern social security standards adopted by private companies, and enabling migration to this plan of the employee groups linked to SISTEL.

On November 13, 2002, the Brazilian Secretariat for Supplementary Pension Plans, through official ruling CGAJ/SPC No. 1917, approved the statutes of the new pension plan, or hereafter the Statutes of the TIMPREV Benefits Plan, as a defined contribution plan, which provide for new conditions for granting and maintaining benefits, as well as the rights and obligations of the Plan Managing Entity, the sponsoring companies, participants and the beneficiaries thereof.

Under this new plan, the sponsor's regular contribution will correspond to 100% of a participant's basic contribution, and TIMPREV's managing entity will ensure the benefits listed below, under the terms and conditions agreed upon, with no obligation to grant any other benefits, even if the government-sponsored social security entity starts granting them:

- Normal retirement pension
- Early retirement pension
- Disability pension
- Deferred proportional benefit
- Death benefit

However, as not all of the Company's and its subsidiaries' employees have migrated to TIMPREV, the pension and health care plans deriving from the TELEBRÁS system listed below remain in force:

PBS: defined benefits plan of SISTEL, which includes active employees who participated in the plans sponsored by the companies of the former TELEBRÁS system;

PBS Assistidos: a multi-sponsored pension plan for inactive employees;

Convênio de Administração: for managing pension payments to retirees and pensioners of the predecessors of the subsidiary companies; and

PAMEC/Apólice de Ativos: health care plan for pensioners of the predecessors of the subsidiary companies.

As happened with the *Termo de Relação Contratual Atípica*, or TRCA Plan, the Company, until December 31, 2010, had understood that it was responsible for liabilities of PAMEC participants (health care plan) related to the Company and its subsidiaries. Based on a new understanding of its internal and external lawyers, the Company has changed its position. As a result, the liabilities previously recorded were written off.

In accordance with the rules established by NPC-26 issued by the Institute of Independent Auditors of Brazil – IBRACON, and approved by CVM Resolution No. 371, the plans having a surplus are not recorded by the Company, as it is impossible to recover these amounts. Furthermore, the amounts of contributions will not be reduced for future sponsors.

On January 29, 2007 and April 9, 2007, through the Brazilian Secretariat for Supplementary Pension Plans- SPC, the Ministry of Social Security approved the transfer of the management of the PBS–Tele CelularSul, TIM PrevSul, PBT–TIM, Convênio de Administração, PBS–Telenordeste Celular and TIM PrevNordeste benefit plans (according to SPC/DETEC/CGAT Communications Nos. 169, 167, 168, 912, 171 and 170, respectively) from SISTEL to HSBC – Fundo de Pensão.

The PBS Assistidos plan continues to be managed by SISTEL. The only exception is Plano PAMEC, which was extinguished, with the Company remaining responsible for coverage of the respective benefit, which is now called PAMEC/Apólice de Ativos.

In 2018, contributions to pension plans and other post-employment benefits amounted to R\$57.9 million (R\$47.0 million in 2017).

Item 6. Directors, Senior Management and Employees

A. Directors and Senior Management

Board of Directors

We are administered by a Board of Directors (*Conselho de Administração*) and a Board of Statutory Officers (*Diretoria*), which are overseen by a Fiscal Council (*Conselho Fiscal*) and a Statutory Audit Committee (*Comitê de Auditoria Estatutário*). The Board of Directors is composed of five to nineteen members, each serving for a two-year term with the possibility of re-election.

Directors' duties and responsibilities are determined by Brazilian law, our By-laws (*Estatuto Social*) and our Disclosure and Corporate Governance Policy (*Política de Divulgação/Negociação e Diferenças de Governança Corporativa da NYSE*), as determined by CVM Instruction 358/2002. All decisions taken by our Board of Directors are recorded in the board's minute books. The Board of Directors holds regular meetings once every quarter of the fiscal year and also holds special meetings whenever called by the chairman, by two directors or by the Chief Executive Officer. The chairman of the Board of Directors may invite any of our key employees to the Board of Directors' meetings, in order to discuss any relevant corporate matter. The Board of Directors has two special advisory committees: the Compensation Committee (*Comitê de Remuneração*) and the Control and Risks Committee (*Comitê de Controle e Riscos*), both composed only of members of the Board of Directors. The Statutory Audit Committee also reports to the Board of Directors and is composed of independent members of the Board of Directors.

Members of our Board of Directors are required to comply with, and have agreed to comply with, our Disclosure and Corporate Governance Policy, our Code of Ethics and certain other Brazilian law regulations including the “*Regulamento de Listagem do Novo Mercado da B3 S.A. - Brasil, Bolsa Balcão – Bolsa de Valores Mercadorias e Futuros*.”

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The following are the current members of the Board of Directors and their respective titles, whose terms of office will be valid until the annual shareholders' meeting to be held in 2021:

Name	Title	Date of Birth	Date Appointed
Alberto Emmanuel Carvalho Whitaker	Director	October 10, 1940	March 28, 2019
Carlo Nardello	Director	May 9, 1964	March 28, 2019
Pietro Labriola	Director	October 1, 1967	March 28, 2019
Herculano Aníbal Alves	Director	February 27, 1953	March 28, 2019
Elisabetta Romano	Director	April 1, 1963	March 28, 2019
Gesner José de Oliveira Filho	Director	May 17, 1956	March 28, 2019
Piergiorgio Peluso	Director	March 25, 1968	March 28, 2019
Nicandro Durante	Director	September 13, 1956	March 28, 2019
Agostino Nuzzolo	Director	April 12, 1968	March 28, 2019
Raimondo Zizza	Director	January 9, 1964	March 28, 2019

Mr. Whitaker, Mr. Herculano Alves, Mr. Gesner Filho and Mr. Nicandro Durante are qualified as independent directors according to Brazilian independence standards. They are scheduled to be re-elected or replaced at the annual shareholders' meeting to be held in 2021. Set forth below are brief biographical descriptions of the members of the Board of Directors.

Alberto Emmanuel Carvalho Whitaker. Mr. Whitaker holds a degree in Law from Faculdades Metropolitanas Unidas – FMU and is a lawyer duly admitted to the Brazilian Bar Association, São Paulo Section (OAB/SP). He is also a business administrator duly registered at the Regional Administration Council of São Paulo (CRA/SP). He attended several extension courses focused on Corporate Governance at the following institutions: Instituto Brasileiro de Governança Corporativa (IBGC), the University of Chicago, the International Institute for Management Development (IMD, Lausanne), the National Association of Corporate Directors - Washington, and the Global Corporate Governance Forum - IFC-Washington. Mr. Whitaker has also been a member of the Board of Directors of various national and multinational companies, and is currently a member of the Board of Directors of IBGC, the fiscal council of the Museu de Arte de São Paulo, a member of the Board of Directors of the Fundação Bienal de São Paulo, a Director at the São Paulo Regional Administrative Council (*Conselho Regional de Administração de São Paulo*) and a member of the Caixa Economica Federal. Mr. Whitaker also held the position of executive director of several prominent financial entities and general manager of the Brazilian subsidiaries of the SCR Sibelco, a world leader in the mining and processing of industrial minerals from 1991 to 2006. At TIM Participações, Mr. Whitaker was a member of the Fiscal Council/Audit Committee, from April 11, 2008 to December 12, 2013; chairman of the Fiscal Council/Audit Committee from October 28, 2010 to December 12, 2013, a member of Control and Risks Committee from May 8, 2014 to April 26, 2017, and has been a member and coordinator of the Statutory Audit Committee from December 12, 2013 to date and a member of the Board of Directors from May 8, 2014 to date.

Carlo Nardello. Mr. Nardello is an Italian citizen, born in Rome, Italy, with a University Degree in Economics issued in 1988 by LUISS (Libera Università Internazionale degli Studi Sociali). Mr. Nardello has over 20 years of experience in the industry of broadcasting and communications. On January 7, 2019, he was appointed Chief Strategic Development & Transformation Officer at Telecom Italia S.p.A. From November 2016 through 2018, he was co-founder and CEO of CscVision, a consulting firm in media and marketing, as well as, starting from May 2017, Chief of Staff of the Special Commissioners of Alitalia (Italy's national airline). From May 2000 through November 2016 he held various offices at RAI Group (Rai – Radiotelevisione Italiana S.p.A., Italy's public television and media company). Before that, he worked at Lego Company, The Walt Disney Company and Johnson and Johnson. Mr. Nardello is currently a Professor of Digital Marketing at La Sapienza University in Rome, Professor of Media Economics at LUMSA University in Rome, and he was also Professor of Marketing at UNISOB in Naples. He is the author of books on television marketing and in the digital market.

Herculano Aníbal Alves. Mr. Alves received a degree in Economics from Pontifícia Universidade Católica de São Paulo, PUC-SP in 1980, a specialist in Financial Administration from Fundação Getúlio Vargas in 1983 and a master's degree in Finance and Investments from Fundação Getúlio Vargas in 1989 and attended the Governance, Risk and Compliance course from the Risk University of KMPG in 2016. At TIM Participações, Mr. Alves currently serves as member of the Board of Directors and has been a member of the Statutory Audit Committee since April 14, 2015 and as chairman of the Control and Risks Committee since April 26, 2017. He also currently serves as Director at Barigui Gestora de Recursos Ltda. since 2016, as member of the Fiscal Council at Grupo Fleury since 2018, and as member of the Fiscal Council at EcoRodovias since 2018. From May 2014 to April 2015, Mr. Alves was an Equities Consultant at BRAM – Bradesco Asset Management S.A. DTVM, or BRAM. He was Director of Equities of BRAM US from September 2011 to March 2015, Head of Equities at BRAM – Bradesco Asset Management Ltda. from July 2001 to April 2014, and Senior Manager of Equities at Bradesco Templeton Asset Management Ltda. from June 1998 to June 2001. Previously, he also held the position of Director at the banking company ABN AMRO from February 1995 to

June 1998 and he served as an equity portfolio manager, investment analysis manager and analyst at Unibanco from June 1985 to January 1995. From January 1983 to June 1985, he worked at Banco Bozano Simonsen in the credit area, and from March 1971 to September 1982 at the bus company Vila Carrão Ltda. in the administrative and financial area. Mr. Alves was a member of the Investment Committee and of the Assets Allocation Committee of BRAM from 2001 to 2015, and was also member of the Monthly Committee of BRAM with the vice-presidents of Banco Bradesco. He serves as fiscal council member of Cielo S.A. and Grendene S.A., both since 2015. Mr. Alves was a member of the Board of Directors of Marfrig Brazil Foods from 2015 to 2016, he occupies the position as a member of the Mergers and Acquisitions Committee (Comitê de Aquisições e Fusões) since 2015 and the position as a member of the Council of Supervision of the Investment Analysts (Conselho de Supervisão dos Analistas de Investimentos), or CSA since 2016. He was also a Board of Directors member of the Association of Capital Markets Investors (Associação dos Investidores do Mercado de Capitais) from 2011 to 2016, President of the Private Equity Funds Commission of Anbima (Comissão de Fundos de Ações de Anbima) from 2012 to 2016, and he was technical director and adviser of the Brazilian Association of Capital Markets (Associação Brasileira de Mercado de Capitais), or ABAMEC / SP, from 1982 to 1992. In addition, he served has served as advisor to various private equity investment funds and since 2012 he has been an alternate member of the Board of Directors of the fund 2BCapital. Mr. Alves was also a Professor at Fundação Armando Alvares Penteado - FAAP.

Elisabetta Romano. Ms. Romano is an Italian citizen, born in Milan, Italy, with a Masters in Computer Science issued by the University of Salerno – Fisciano (Italy) in 1987. She has over 30 years of experience in the industry of telecommunications, information technology and media, in the United States and Europe. Before being appointed, on July 1st, 2018, Chief Technology Officer, at Telecom Italia S.p.A., Ms. Romano developed her career at Ericsson Group, where she worked from 1998 through 2018, holding various top management positions. She was honored as one of the 2017 Top 50 Women in Technology by the National Diversity Council.

Piergiorgio Peluso. Mr. Peluso holds a degree in Economics and Social Sciences, with specialization in Finance, at Università Commerciale Luigi Bocconi. Mr. Peluso has been member of the Board of Directors at TIM Participações since March 2018 and a member of Control and Risks Committee since April 2018, and has been the Chief Financial Officer of Telecom Italia SpA since 2012. From 2011 to 2012, Mr. Peluso was the General Manager of Fondiaria-SAI S.p.A, acting in the recovery plan of the insurance group and later integration with the Unipol group. Following the merger of UniCredit Corporate Banking S.p.A. with UniCredit S.p.A. in 2010, Mr. Peluso was appointed Head of Corporate & Investment Banking Italy, UniCredit Group. In 2009, Mr. Peluso was an Executive Officer of UniCredit Corporate Banking S.p.A.

Gesner José de Oliveira Filho. Mr. Oliveira is a partner of GO Associados and Professor of Economics at Getulio Vargas Foundation. He has been certified as an independent board member by IBGC (Brazilian Institute of Corporate Governance) and has been a member of the Board of CESP, Sabesp, Nossa Caixa and Varig. At present, he is a member of the Board of Directors of Braskem, Igua and Estre Ambiental, CIEE, Etco, as well as a member of the Self-Regulation Council of Febraban. His previous positions include being the CEO of Sabesp – Companhia de Saneamento Básico do Estado de São Paulo (2007-11), one of the largest water companies in the world; President of CADE, the federal antitrust authority (1996-2000); Deputy Secretary for Economic Policy (1993-95) and Secretary for Economic Monitoring (1995), both at the Ministry of Finance. He received his PhD in Economics from the University of California (Berkeley). He has worked as a private consultant since the 1990s and published several books and articles in national and international journals. His work has focused on competition policy, macroeconomics and infrastructure which are related with his experience at CADE, Ministry of Finance and Sabesp, respectively.

Nicandro Durante. Mr. Durante is a Brazilian and Italian citizen, born in September 1956, with BA Business Administration issued by Pontifical Catholic University (*Pontifícia Universidade Católica*), Brazil. With almost forty years of experience in the tobacco industry, since 2011 Mr. Durante has served as Chief Executive Officer at British American Tobacco, where he has held several top management positions during the past decades, including Corporate Chief Financial Officer, Regional Director, Executive Director, Chief Operating Officer. Mr. Durante is non-executive Director and Senior Independent Director at Reckitt Benckiser, a leading company in the health and care industry.

Agostino Nuzzolo. Mr. Nuzzolo holds a degree in Law, Economics and has been member of the Board of Directors, member of the Compensation Committee and member of the Control and Risk Committee at TIM Participações, since April 2018. From 2008 to 2016, Mr. Nuzzolo served as General Counsel, Acting Director of Human Resources and Director of Organization and Information Technology at Italcementi Group. From 2016 to February 2018, Mr. Nuzzolo was Secretary of the Board of Directors, General Counsel and Head of legal affairs, at Telecom Italia, where he currently acts as Secretary of the Board of Directors, General Counsel, Legal, Regulatory and tributary Officer, since 2018. Mr. Nuzzolo also serves as Interim Director of Human Resources and Organizational Development, since November 2017, at Telecom Italia S.p.A.

Raimondo Zizza. Mr. Zizza holds a degree in Electronic Engineering and has been member of the Board of Directors and member of the Control and Risks Committee at TIM Participações since April 2018. From September 2012 to January 2017, Mr. Zizza served at TIM Celular (now TIM S.A.), as Director of Information Technology. Since 2017, Mr. Zizza also has been Director of Information Technology at Telecom Italia S.p.A.

Pietro Labriola. Mr. Pietro Labriola is an Italian citizen, of Altamura, Bari, Italy, with a degree in Administration from Universidade de Studi of Bari, Italy, in 1991, and a master's degree in Innovation and Technology Management from ASMIT Advanced School of Bari, Italy, in 1993. With over 20 years of experience in the telecommunications sector, Mr. Labriola assumed the position of Chief Operating Officer at TIM Participações between December 2015 and August 2018; the position of Chief Operating Officer of TIM Celular S.A. between April 2016 and August 2018; the position of Chief Operating Officer of TIM S.A. between May 2016 and August 2018; the position of Chief Executive Officer of TIM S.A. between February 2017 and May 2018. Prior to this, he held the following positions in the Telecom Italia group: Chief Transformation Officer from 2013 through 2015, Executive Vice President Business Market from 2009 through 2012, Executive Vice President Fixed Line Services from 2007 through 2008, Executive Vice President Marketing from 2001 through 2006. From 1996 through 2001, Mr. Labriola held positions as Marketing Director and Business Director at Infostrada Serviços de Comunicações Fixas. On April 3, 2019, he was appointed the Chief Executive Officer at TIM Participações.

We do not have contracts with our directors providing benefits upon termination of their appointments.

Board of Statutory Officers

Pursuant to our By-laws, our Board of Statutory Officers (the members of which we also refer to as our Statutory Officers) is comprised of at least two and no more than twelve members, who may or may not be shareholders. The title of the members of our Board of Statutory Officers shall be as follows: (1) Chief Executive Officer, (2) Chief Financial Officer, (3) Investors Relations Officer, (4) Business Support Officer, (5) Regulatory and Institutional Affairs Officer, (6) Legal Officer; and (7) and Chief Technology Officer. Each member of our Board of Statutory Officers, who serve two-year terms of office (with re-election permitted) may be elected or dismissed by our Board of Directors at any time and with no cause.

The following are the current members of the Board of Statutory Officers and their respective titles, whose terms of office will remain valid until the first Board of Directors' Meeting to be held after the 2020 annual shareholders' meeting:

Name	Title	Date of Birth	Date Appointed
Pietro Labriola	Chief Executive Officer	October 1, 1967	April 3, 2019
Adrian Calaza	Chief Financial Officer and Investor Relation Officer	March 8, 1967	September 2, 2016 and October 2, 2017, respectively
Bruno Mutzenbecher Gentil	Business Support Officer	January 1, 1969	February 5, 2018
Mario Girasole	Regulatory and Institutional Affairs Officer	June 8, 1968	May 11, 2016
Jaques Horn	Legal Officer	March 15, 1964	May 11, 2016
Leonardo de Carvalho Capdeville	Chief Technology Officer	September 4, 1969	May 11, 2016

Brief biographical descriptions of our statutory officers are set forth below.

Pietro Labriola. See “—Board of Directors.”

Adrian Calaza. Mr. Calaza is an Argentine citizen, graduated in business administration from the University of Belgrano and holds an MBA in Management and Business Administration from the University of CEMA. With extensive experience in the telecommunications industry, Mr. Calaza was elected Chief Financial Officer in TIM Participações SA in September 2016. Before that, he held the position of Chief Financial Officer in Telecom Argentina from 2009 to 2016, where he also was Corporate Administrative Services Manager from 2007 to 2009. Previously, Mr. Calaza held various executive roles, including Capital Expenditures and Control Manager at TIM Participações S.A. from 2006 to 2007, Chief Financial Officer at Telecom América Latina S.A. from 2004 to 2005 and Chief Financial Officer in Entel S.A. from 2000 to 2004. Mr. Calaza joined the Telecom Italia Group in January, 1999, where he held various positions, including Chief Financial Officer of Entel S.A., in Bolivia, a subsidiary of the Telecom Italia Group and Corporate Chief Financial Officer of Telecom América Latina S.A. in Brazil.

Bruno Mutzenbecher Gentil. holds a degree in Business Administration and has been the Purchasing & Supply Chain Officer at TIM Participações since February 2018. From 2016 to 2017, Mr. Gentil served as Vice President of Corporate Resources at Telefônica Brasil S.A., where he also held the position of Vice President of Strategy and Consolidation between 2015 and 2016. Previously, from 2013 to 2015, Mr. Gentil served as Vice-President of Finance at GVT - Global Village Telecom S.A., where he also held the position of Controller in the period from 2006 to 2013.

Mario Girasole. Mr. Girasole is an Italian citizen with a Laurea Magistralis in Economics from University LUISS (Rome). He also has an L.L.M. in International Business Law (London), post graduate in Competition Policy, in International Commerce and Modern Economic History, and executive education at London Business School (Finance), Harvard (School of Government), Columbia Business School (Advanced Management Program) and INSEAD (International Directors Programme). He joined TIM in 1997, for the regulatory and pricing area, in Rome. From 2000 to 2003, he headed, in Brussels, the TIM Group relations with the institutions of the European Union, and was appointed to the position of Deputy-Chairman of the European Mobile Sector (GSM Europe). Starting from 2004, he was Head of Public and Regulatory Affairs at Telecom Italia America Latina and at TIM Brasil. During this period, he worked also as Director of Entel Bolivia and Alternate Director of TIM Participações. Mr. Girasole is the Regulatory and Institutional Affairs Officer of the Company since January 2009 and since 2012, he runs the Press Relations and the Corporate Social Responsibility departments. He is also member of the Boards and Councils of national and international entities, including SindiTelebrasil, GSM Latin America, Italo-Brazilian Chamber of Commerce and the Brazilian Institute for Competition Studies (*Instituto Brasileiro de Estudos da Concorrência*), or IBRAC. In September 2014, Mr. Girasole was awarded as Knight of the Order of the Star of Italy by the President of the Italian Republic “for promoting friendly relations and co-operation with other countries and ties with Italy.”

Jaques Horn. Mr. Horn graduated in Law (LLB) at Candido Mendes University, and obtained specializations at Harvard and at the Academy of International and American Law. He has been Chief Legal Officer at TIM since July 2010 and Secretary of the Company's Board of Directors since 2012. He worked at Tetra Pak from 2007 to 2010, as Legal Director, where he was responsible for the Central and South America and the Caribbean region. He also worked at Shell, from 1994 to 2007, as Legal Corporate Manager at the holding company and Legal Director at the subsidiary companies. Mr. Horn worked as Legal Counsel at Companhia Atlantic de Petroleo (ARCO Petroleum Co.) from 1990 to 1994, as a Lawyer at Franco, Bhering, Barbosa & Novaes Law Firm for one year, and as a Tax Senior Consultant at Arthur Andersen for almost four years.

Leonardo de Carvalho Capdeville. Mr. Capdeville holds a degree from Instituto Nacional de Telecomunicações – INATEL in Electronic Engineering, specializing in Telecommunications. He also holds an MBA from Fundação Getúlio Vargas in Rio de Janeiro, Brazil. Mr. Capdeville also attended the International Program of Management Development at IEDE - Institute for Executive Development in Madrid, Spain and to the Disruptive Innovation Program by the Harvard Business School. Currently, he is Chief Technology Officer of the Company, elected on February 12, 2015 and a member of the Trustee Council of the Telecommunications Research and Development Center (*Centro de Pesquisa e Desenvolvimento de Telecomunicações*), or CpQD. Prior to that, Mr. Capdeville was responsible for the Network, IT and Wholesale departments at the Company. From 1998 to 2014, Mr. Capdeville was a Network Director at Telefônica Brasil (under the brand name Vivo). Mr. Capdeville also worked at Promon Eletrônica Ltda, or Promon, from 1991 to 1995 and then from 1996 to 1998. While at Promon, he held the position of engineer responsible for implementing the mobile telephony in the State of Espírito Santo, Brazil, and performed other activities related to network projects. From February 1995 to October 1996, Mr. Capdeville worked at Gerenciamento e Assessoria de Serviços S/C Ltda., as coordinator of the implementation of the team and of the data communication area.

There are no family relationships among any of our directors and statutory officers, nor any arrangement or understanding with major shareholders, customers or suppliers pursuant to which any director or executive officer was selected.

Statutory Audit Committee

The current composition of the Statutory Audit Committee consists of three members, elected by our controlling shareholder. None of the members were elected by the minority shareholders.

The following are the current members of our Statutory Audit Committee:

Name	Date of Birth	Date Appointed
Alberto Emmanuel Carvalho Whitaker	October 10, 1940	April 3, 2019
Gesner José de Oliveira Filho	May 17, 1956	April 3, 2019
Herculano Aníbal Alves ^(*)	February 27, 1953	April 3, 2019

^(*) Audit committee financial expert.

The Statutory Audit Committee was created and its first members appointed at the shareholders' meeting held on December 12, 2013, in accordance with Rule 10A-3 under Section 301 of the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley, and CVM Instruction 509/2011. The Statutory Audit Committee's internal regulations were approved at the Board of Directors meeting held on December, 23, 2013.

The Statutory Audit Committee is composed of at least three (3) and at the most five (5) members, all elected by the Board of Directors, who serve two-year terms of office, matching the terms of the members of the Board of Directors. Re-election is permitted up to, for a maximum period of 10 years. Members of the Statutory Audit Committee may be dismissed by our Board of Directors at any time and without cause.

The Statutory Audit Committee's general duties and responsibilities under Brazilian corporate law, our By-laws and its internal rules, include: (i) opining, preliminarily, on the hiring and removal from office of the independent auditor in charge of auditing the financial statements, or any other service provided by such auditor, whether or not it may be related to auditing; (ii) analyzing the auditor's annual work plan, discussing the results of the activities performed, revisions made and assessing the performance of the independent auditors; (iii) supervising independent auditors' activities to assess their independence, quality and adequacy of the services provided to the Company, including, to

the full extent permitted by law, assistance solving any disagreement between the management and the independent auditors concerning the presentation of financial statements; (iv) supervising the activities performed by the internal audit department, and for that purpose analyzing the annual work plan, discussing the results of the activities performed, the revisions made and assess the performance of internal auditors; (v) supervising and analyzing the effectiveness, quality and integrity of the Company's internal controls over financial reporting, in order to, inter alia, monitor the implementation of the provisions related to: (a) the presentation of the financial statements, including quarterly financial information and other interim statements; and (b) the disclosure of information and evaluations based on adjusted financial data and on non-accounting data, resulting in unexpected additions to the structure of the usual reports on financial statements; (vi) analyzing complaints, anonymous or not, concerning any accounting matters from internal controls or audit, received by the Company, as well as suggesting measures that may be taken; (vii) examining, assessing and expressing opinions, in advance, based on the material provided by the Company's management, on whether the contracts to be signed between the Company, or its subsidiaries, on one hand, and the majority shareholder or its subsidiaries, associated companies, or companies under common control or which may control the said shareholder, or parties related in some other way to the Company, on the other hand, meet the standards that normally apply within the market to similar agreements between independent parties, with the Statutory Audit Committee having the right to request further clarification or the opinion of independent third parties, whenever deemed necessary; (viii) drawing up the annual synthesis report, pursuant CVM rules, to be presented, together with the financial statements, including a description of: (a) its activities, the results and conclusions reached and recommendations made; and (b) any situation where there is a significant disagreement between the Company's management, independent auditors and the Statutory Audit Committee regarding financial statements of the Company; and (ix) assessing and monitoring the Company's exposure to risk, with the right to request detailed information on policies and proceedings related to: (a) remuneration of the management; (b) utilization of the Company assets; and (c) expenses incurred on behalf of the Company; and (x) analyze any complaints received by the whistleblowing channel of the Company and its respective envisaged actions of improvement.

Fiscal Council

The current composition of the Fiscal Council consists of three members elected by our controlling shareholder. None of the members were elected by the minority shareholders.

The following are the current members of our Fiscal Council, whose terms of office will be valid until the annual shareholders' meeting held in 2020:

Name	Date of Birth	Date Appointed
Walmir Kesseli	August 28, 1959	March 28, 2019
Elias de Matos Brito	July 28, 1965	March 28, 2019
Jarbas Tadeu Barsanti Ribeiro	March 18, 1951	March 28, 2019

Under Brazilian corporate law, our By-laws and the internal rules of the Fiscal Council, the Fiscal Council's general duties and responsibilities include monitoring the actions of management and verifying its compliance with legal duties and appropriate statutes; providing opinions regarding management's annual report, business plans and budgets; and performing reviews of, and opinions regarding our financial statements. All members serve independently from the Company in their capacities on the Fiscal Council.

Other Committees

We have other non-statutory committees including a Compensation Committee and a Control and Risks Committee.

Compensation Committee

The Compensation Committee was established by the Board of Directors on September 30, 2008 to: (1) prepare proposals for our Board of Directors regarding allotment of the overall annual remuneration approved by general shareholders' meeting; (2) provide our Board of Directors with proposals concerning the remuneration of our statutory officers; (3) evaluate the compensation criteria of Company's statutory officers; and (4) monitor the performance of the decisions taken by management and the Company's policies relating to senior executive compensation; and (5) analyze other matters concerning the compensation of the Company's members, as delegated by the Board of Directors.

The members of our Compensation Committee are appointed and dismissed by our Board of Directors. The Compensation Committee consists of three members, all of whom are effective members of our Board of Directors.

The following are the current members of our Compensation Committee:

Name	Date of Birth	Date Appointed
Nicandro Durante	September 13, 1956	April 3, 2019
Carlo Nardello	May 9, 1964	April 3, 2019
Agostino Nuzzolo	April 12, 1968	April 3, 2019

Control and Risks Committee

The Control and Risks Committee was established by the Board of Directors on June 18, 2013, and tasked with the following responsibilities: (a) recommending internal control measures to be adopted by the Board of Directors establishing the specific authority of the Board of Statutory Officers and the limits of such specific authority, subject to the provisions of the By-laws, as well as deciding on the assignment of new functions to the Directors; (b) monitoring the Company's compliance with our corporate governance policy and periodically updating the same; (c) without prejudice to the competence of the Board of Directors, recommending procedures for better supervision of the management of the Directors; (d) acknowledging the internal audit work plan reviewed by the Company's Statutory Audit Committee in accordance with the Company's By-laws; (e) approving the compliance department's work plan and monitoring compliance with the same; (f) reviewing and evaluating periodic reports issued in accordance with the internal control and risk management system by the internal audit department and the compliance department and, in connection with the same, requesting that the internal audit department review specific operational areas or that the compliance department develop new procedures; (g) requesting information from the Board of Statutory Officers regarding specific processes or issues of the Company and / or its subsidiaries, whenever it deems appropriate; (h) supervising and monitoring issues related to the social responsibility of the Company, aiming at the sustainable development of the Company and / or its subsidiaries, and monitoring the Company's compliance with the principles established in our Code of Ethics and Conduct; and (i) analyzing any other matters related to the internal control of the Company as are delegated by the Board of Directors.

The members of our Control and Risks Committee are appointed and dismissed by our Board of Directors. The Control and Risks Committee shall be composed of up to five members, of which two members should be independent, and all of whom shall be members of our Board of Directors.

The following are the current members of the Control and Risks committee:

Name	Date of Birth	Date Appointed
Herculano Aníbal Alves	February 27, 1953	April 3, 2019
Gesner José de Oliveira Filho	May 17, 1956	April 3, 2019
Piergiorgio Peluso	March 25, 1968	April 3, 2019
Agostino Nuzzolo	April 12, 1968	April 3, 2019
Raimondo Zizza	January 9, 1964	April 3, 2019

B. Compensation

In a meeting held on March 28, 2019, the shareholders voted to approve the aggregate amount of approximately R\$30.0 million as compensation to our statutory officers, approximately R\$1.9 million to our committees' members, approximately R\$0.5 million to our fiscal council's members and approximately R\$4.9 million as compensation to our Board of Directors during 2019. The statutory officers' and directors' compensation is composed of fixed remuneration, benefits, bonuses, short-term incentives and participation in long-term incentive plans. Accordingly, we did not set aside or accrue any amounts to provide pension, retirement or similar benefits to our officers and directors during 2019. The aggregate compensation to our statutory officers in the year ended December 31, 2018, including fixed remuneration, benefits, bonuses, short-term incentive and long term incentive plans, was approximately R\$36,316,553 considering INSS (approximately R\$34,678,943 without INSS).

Our statutory officers and other managers of the Company are eligible to receive a short-term incentive (Management by Objectives, or MBO) bonuses. The general criteria for the MBO bonus are approved by our Board of Directors and provide that eligible statutory officers and other managers may receive an amount calculated based on the organizational roles and certain pre-established performance targets.

Some key officers are also eligible to participate in a long-term incentive plan. The general criteria for the 2019 program are approved by our Board of Directors and provide that eligible participants may receive shares in part through the achievement of long term strategic goals (or so-called performance shares) and in part by remaining employed with the Company until the completion of the vesting period (or so-called restricted shares).

For the year ended on December 31, 2018, each member of our Board of Directors received annual compensation an average of R\$678,322 considering INSS (R\$576,860 without INSS) and each member of our Fiscal Council received annual compensation of R\$211,456 considering INSS (R\$165,200 without INSS), paid pro rata according to each member's time of service on such body.

C. Board practices

See “—A. Directors and Senior Management” and “—B. Compensation.”

D. Our Employees

On December 31, 2018, we had 9,661 full-time employees. We do not employ a significant number of temporary employees. The following tables show a breakdown of our employees as of December 31, 2018, 2017 and 2016.

	As of December 31,		
	2018	2017	2016
Network & Information Technology	2,360	2,281	2,297
Sales and marketing	3,309	3,326	3,414
Customer care	2,577	2,526	2,734
Support and other	1,415	1,441	1,418
Total number of employees	9,661	9,574	9,863

All employees are represented by state unions affiliated with the following federations: National Federation of Telecommunications Workers and the Workers' Federation. We negotiate annually a new collective bargaining agreement and profit sharing program with both unions. Management believes that our relationships with our workforce are satisfactory. We did not experience a work stoppage that had a material effect on our operations.

Employee Benefit Plans

The Company and its subsidiaries have defined benefit and defined contribution plans in place. In general, defined benefit plans establish a specific retirement benefit amount that an employee will receive upon retirement, usually dependent on one or more factors such as age, length of service and remuneration.

The liability recognized in the balance sheet with respect to defined benefit pension plans is the present value of the defined benefit liability as at the balance sheet date, less the fair value of plan assets, and past service cost adjustments are not recognized. The defined benefit obligation is calculated annually by independent actuaries, using the projected unit credit method. The present value of defined benefit obligation is determined by discounting estimated future cash outflows, using interest rates consistent with market yields, which are denominated in the currency in which benefits

will be paid and which have maturities close to those of the respective pension plan liabilities.

The actuarial gains and losses resulting from changes in actuarial assumptions are recorded within shareholders' equity as other comprehensive income, as incurred.

Past service costs are recognized immediately in income, unless the changes to the pension plan are conditional upon employees remaining in employment for a specific time period (the period in which the right is acquired). In this case, past service costs are amortized using the straight-line method over the period during which the right was acquired.

With respect to defined contribution plans, the Company makes contributions to pension insurance plans public or private on a mandatory, contractual or voluntary. The Company has no further obligation for payment after the contribution is made. The contributions are recognized as employee benefit expense when due.

Following the acquisition and incorporation of AES Atimus (later TIM Fiber and now TIM S.A.) in 2011, we assumed this Company's defined benefit pension plan.

Currently, there are no more active participant contributions to TIM Fiber plan and there is no payment of monthly contributions.

Since 2006, the Company's pension funds had been administered by HSBC. After a two-year process beginning in 2011, during which the company evaluated other multiemployer pension fund management companies, the company elected to transfer the administration of the following pension plans to Icatu Pension Funds (*Icatu Fundo Multipatrocinado*), a pension fund management company in Brazil: Defined Benefit Plan – Tele Celular Sul PBS; PBS Tele Nordeste Celula; Defined Contribution Plan – Nordeste TIMPREV, TIMPREV Sul; and Intelig Gente.

In February 2013, the National Superintendency of Pension Funds (*Superintendência Nacional de Previdência Complementar*), or PREVIC, approved the transfer of administration, and the entire transfer process was concluded in May 2013. Since this time, these plans have been closed to new members. The Benefit Plan PBT TIM remains managed by HSBC.

Share-Based Compensation Plan

We operate share-based compensation plans, which in our previous plan consisted of stock options and which in our new plan consists of performance shares and/or restricted shares, under which we receive the services of certain employees in consideration for equity granted. The fair value of the employee's services is recognized as an expense, with a compensating entry to capital reserves, and are determined by reference to the fair value of the options granted. Non-market-related vesting conditions are included in the assumptions underlying the number of option which will vest. The total expense amount is recognized during the period over which the rights vest, when specific vesting conditions should be fulfilled. On the balance sheet date, the entity reviews its estimates regarding the number of options which will vest, based on the non-market-related vesting conditions. It recognizes the effect of this review of initial estimates, if any, in the income statement, with a corresponding adjustment to the capital reserve.

Amounts paid to employees, net of any directly attributable transaction costs, are credited to capital reserve and share issuance premium reserve, if applicable, when options are exercised or shares are granted.

Defined Contribution Plan

During 2002, TIM created a new defined contribution pension plan, or TIMPREV, which allowed employees to migrate from the former pension plan. The Secretary of Complementary Pension approved TIMPREV on November 13, 2002 in Notification 1,917 CGAJ/SPC. TIMPREV sets forth new guidelines for the granting and maintenance of benefits and outlines new rights and obligations for SISTEL, the plan administrator; sponsors; participants and their respective beneficiaries.

Migration from the PBS Plan to TIMPREV is optional. In order to encourage migration to TIMPREV, we offered bonuses to those employees migrating before January 29, 2003. As of December 31, 2004, more than 90% of the participants in our private plan had migrated to TIMPREV. Upon electing to migrate to TIMPREV, a participant extinguishes all rights to benefits under the PBS Plan.

During 2008, the Company made its best effort to encourage migration of the remaining participants of the defined benefit plans to TIMPREV. Even though employees agreed with the migration proposed, legal complications not allow this change prevented the migration at that time. The situation was resolved in 2009 and a new cycle of migration encouragement for TIMPREV was offered. On this occasion more participants migrated to TIMPREV plans, one of the plans (PBT) was closed.

As more employees participate in TIMPREV, we anticipate that the sponsor's risk to eventual actuarial deficit will decrease, consistent with the characteristics of typical defined contribution plans. Under the rules of defined contribution plans, the sponsor normally contributes 100% of the basic contribution of the participant. In accordance with the terms and conditions of the approved rules, the administrator of TIMPREV will ensure the benefits listed below:

- a regular retirement pension;
- an anticipated retirement pension;
- a disability pension;
- a deferred proportional benefit; and
- a death pension.

However, the administrator will not assume responsibility for granting any other benefit, even if social security officially grants it to its beneficiaries.

In accordance with Brazilian law, our employees also receive payments based on our financial performance. The amount of the payment is determined by negotiation between us and the unions representing our employees.

Due to our acquisition of Intelig (now TIM S.A.) in 2010, the pension plan of this company was taken over by TIM. The TIM S.A. pension plan is a closed defined contribution plan, managed by HSBC Pension Fund and is not offered to our employees anymore, since we have started a process with the Secretary of Complementary Pension to change the plan rules, in order to close the plan to new members. For new TIM S.A. employees or those transferred from TIM S.A. to TIM, we now offer the supplementary defined contribution plan managed by Itaú Vida e Previdência S.A., since TIM S.A. also became a sponsor of this plan.

E. Share Ownership

As of December 31, 2018, our board members, fiscal council members and statutory officers, owned, in the aggregate, 234,682 common shares, which represented 0.03% of our common shares outstanding. Accordingly, each of our directors or statutory officers beneficially owns less than one percent of outstanding common shares.

Some key officers are also eligible to participate in a long-term incentive plan (stock option plans) for which compensation is based on performance targets for our share price, as further described in “—B. Compensation” and “—D. Our Employees—Share-Based Compensation Plan.”

Item 7. Major Shareholders and Related Party Transactions

A. Major Shareholders

The following table sets forth information relating to the ownership of common shares by TIM Brasil and our officers and directors, as of December 31, 2017. We are not aware of any other shareholder that beneficially owns more than 5% of our common shares.

Name of owner	Common Shares Owned	Percentage of Outstanding
---------------	------------------------	------------------------------

		Common Shares
TIM Brasil Serviços e Participações S.A	1,611,969,946	66.58%
All our officers and directors as a group*	266,527	0.01%
Total	1,612,236,473	66.58%
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* Represents less than 1%.

Since TIM Brasil owns 66.58% of our outstanding common shares, it has the ability to control the election of our Board of Directors and to determine the direction of our strategic and corporate policies. The common shares held by TIM Brasil have the same voting rights as the common shares held by other holders and TIM Brasil has no special voting rights beyond those ordinarily accompanying the ownership of our common shares.

As of December 31, 2018, there were 360,341,470 common shares represented by ADSs. As of such date, the number of common shares represented by ADSs represented 14.9% of our total capital.

TIM Brasil is a wholly owned Brazilian subsidiary of Telecom Italia Finance, which in turn is a wholly owned Dutch subsidiary of Telecom Italia. Telecom Italia is a corporation organized under the laws of the Republic of Italy. In turn, the single largest shareholder of Telecom Italia is Vivendi, which is able to exercise significant influence over Telecom Italia. See “Item 4. Information on the Company—C. Organizational Structure.”

Telecom Italia and its subsidiaries, or the Telecom Italia Group, operate mainly in Europe, the Mediterranean Basin and South America. The Telecom Italia Group is engaged principally in the communications sector and, particularly, the fixed and mobile national and international telecommunications sector. The group is focused currently on digitalization and accordingly is investing in the development of its ultra-broadband network and new technologies.

Significant Changes in Percentage Ownership of Principal Shareholders

None.

Shareholders’ Agreements

None.

B. Related Party Transactions

As of December 31, 2018, we did not owe to our affiliates any amounts arising out of outstanding inter-company loans. We had assets and liabilities in amounts of R\$94,366 thousand and R\$179,084 thousand, respectively, as of December 31, 2018 with companies of the Telecom Italia Group. See Note 35 to our consolidated financial statements.

Guarantees of Obligations of our Subsidiaries

We are guarantor in favor of BNDES, in the amount of R\$1,125 million as of December 31, 2018, under the Credit Agreements of TIM Celular and Intelig (now known as or merged into TIM S.A.).

We are guarantor in favor of KfW IPEX, in the amount of U.S.\$43 million as of December 31, 2018, under the Loan Agreement of TIM Celular (now TIM S.A.).

We are guarantor in favor of KfW IPEX, in the amount of U.S.\$379 million as of December 31, 2018, under the Loan Agreement of TIM Celular (now TIM S.A.) between Finnish Export Credit as lender and KfW IPEX as facility agent.

We are a guarantor in favor of FINAME, in the amount of R\$390 million as of December 31, 2018, under the Loan Agreement of TIM S.A.

We are guarantor in favor of Simplific Pavarini Distribuidora de Títulos e Valores Mobiliários Ltda., in the amount of R\$1,000,000,000 as of December 31, 2018, under the TIM S.A.'s debentures issuance.

For more information on our guarantees of obligations of our subsidiaries, see “Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources—Sources of Funds—Financial Contracts.”

Agreement between Telecom Italia and TIM Participações and our Subsidiaries

At the shareholders' meeting held on March 28, 2019, our shareholders voted on an extension of the Cooperation and Support Agreement, originally signed on May 3, 2007 with Telecom Italia, for an additional 12-month period until April 30, 2020. The purpose of this agreement is to enable us to benefit from Telecom Italia's internationally recognized expertise, built throughout years of operation in more mature and developed markets. The cooperation and support activities to be performed by the parties will be focused on adding value to our operations through:

- Benefiting from Telecom Italia's experience and industrial capacity as one of the major players in the European market;
- Applying the systems/services/processes/best practices that were largely used in the Italian market and may be easily customized for the Brazilian market through limited investments and mitigated implementation risks; or
- An increase in efficacy by adopting in-house solutions that have been widely tested and used.

The extended term of the agreement provides for a total price cap of €8.8 million. The price cap represents the maximum consideration to be paid by TIM Participações operating companies for all the services and support rendered by Telecom Italia during 2019 and 2020 under the agreement.

C. Interests of Experts and Counsel

Not applicable.

Item 8. Financial Information

A. Consolidated Statements and Other Financial Information

See "Item 18. Financial Statements."

Legal Proceedings

The Company and its subsidiaries are subject to judicial and administrative proceedings, including civil, criminal, labor, tax and regulatory claims covering a wide range of matters that arise in the ordinary course of business. We adopted a policy of analyzing each such proceeding and making a judgment as to whether a loss is probable, possible or remote. We make accruals for legal proceedings that we are party to when we determine that losses are probable and can be reasonably estimated. For civil, labor, tax and regulatory proceedings where risk of loss has been classified as possible, there is no provision made and these proceedings are not expected to have a material adverse effect on our business or financial condition. Our judgment is always based on the opinion of our legal advisers. Accrual balances are adjusted to account for changes in circumstances for ongoing matters and the establishment of additional accruals for new matters. While we believe that the current level of accruals is adequate, changes in the future could impact these determinations.

In this annual report on Form 20-F, we disclose in detail those legal proceedings which we and our legal advisors have determined to be material, along with overall summaries and the aggregate value of our legal proceedings where risk of loss is probable. See Note 24 to our consolidated financial statements.

Consumer Lawsuits

As of December 31, 2018, our subsidiaries are party to consumer lawsuits at the judicial and administrative levels where the risk of loss is considered probable amounting to R\$86,039 thousand (R\$88,636 thousand as of December 31, 2017). These lawsuits generally relate to questions regarding alleged improper billing, contract cancellation, quality of services and undue restriction.

PROCON and Public Prosecutor's Office

TIM is involved in judicial and administrative proceedings brought by PROCON and various state public prosecutor's offices where the risk of loss is considered probable in the amount of R\$5,814 thousand as of December 31, 2018 (R\$4,551 thousand as of December 31, 2017). These proceedings arise from consumer complaints related to alleged: (i) failures in the provision of network services; (ii) bundling arrangements for product and services; (iii) issues related to quality care; (iv) violations of PROCON's Customer Service Rules (*Novas Regras Para o Serviço de Atendimento ao Consumidor*); (v) contractual violations; (vi) misleading advertising; and (vii) suspension of loyalty benefits in cases of theft of cell phones.

Former Trade Partners

TIM is a defendant in lawsuits filed by certain former commercial partners for alleged breach of contract. The amounts involved for such lawsuits where the risk of loss is considered probable are of R\$10,378 thousand as of December 31, 2018 (R\$13,152 thousand as of December 31, 2017).

Most materially, TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization) is the defendant in a lawsuit filed by Botafogo Comércio e Importação Ltda. in 2002, by a former commercial partner, who argues that TIM Celular (now TIM S.A.) did not perform the contract and practiced unfair competition which ended up putting them out of business. A settlement procedure commenced and was adjudicated, whereby TIM Celular (now TIM S.A.) was required to pay consequential damages, lost profits and moral damages. In the meantime, TIM Celular (now TIM S.A.) filed an action to reverse the judgment, in which the Court rendered a decision to partially uphold TIM's claims, in order to modify the methodology of calculation of damages, lost profits and moral damages. The calculations of such damages, prepared by a retained expert witness, amounted to approximately R\$2,773 thousand as of January 12, 2015. Currently, TIM is waiting for a decision to be handed down in respect of Botafogo Comércio e Importação Ltda's appeal.

Social, Environmental, and Infrastructure

As of December 31, 2018, our subsidiaries are party to lawsuits with various actors arising from environmental licensing and installation / operation licensing issues. The amounts involved in such lawsuits where the risk of loss is considered probable are R\$239 thousand as of December 31, 2018 (R\$3,157 thousand as of December 31, 2017).

Other

We are also party to other civil claims brought by several third parties mentioned above, in respect of, among others: (i) renewal of lease agreements; (ii) equity subscription of shares; (iii) compensation claims; (iv) alleged breach of contract; and (v) debt actions. The amounts involved in such civil claims where the risk of loss is considered probable are R\$3,060 thousand as of December 31, 2018 (R\$18,224 thousand as of December 31, 2017).

Additionally, TIM S.A. (formerly Intelig) is involved in a lawsuit filed by a creditor of Editora JB, Gazeta Mercantil and Problem Solver Consultoria Ltda. The judge in that case ordered a seizure order on TIM S.A.'s bank account in the amount of R\$3,373 thousand based on the reasoning that Editora JB and Gazeta Mercantil are part of the same economic group as TIM S.A.

TIM S.A. has filed an interlocutory appeal, which was not granted. After that, TIM S.A. filed a request for amendment, which was also rejected. TIM S.A. filed an appeal to the Superior Court (*Superior Tribunal de Justiça*), which also was denied. The National Treasury Attorney's Office (*Procuradoria-Geral da Fazenda Nacional*) filed a motion contesting the discussed values. The relevant amount is still maintained in an escrow account (judicial

deposit).

Labor Claims

A significant percentage of our labor claims relate to either claims filed by former employees of service providers who, in accordance with Brazilian labor legislation, have filed claims against us on the grounds that we are responsible for labor-related obligations not satisfied by the service provider companies, or our organizational restructuring processes, in particular the closure of our customer service call centers, including in-house staff and outsourced personnel.

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During the year ended December 31, 2018, according to the Company's legal advisors, certain labor lawsuits went from a possible prognosis of loss to a probable prognosis of loss, with a corresponding change to the provision recorded. There were 3,948 labor claims where the risk of loss is considered probable filed against the Company and its subsidiaries as of December 31, 2018, (1,845 as of December 31, 2017), most of which relate to employment claims filed by employees as well as claims that involve former employees of service providers. The amount involved in such labor claims is R\$426,570 thousand as of December 31, 2018 (R\$172,467 thousand as of December 31, 2017).

There was a public civil action filed by the Labor Public Prosecutor's Office of the Third Region, in the State of Minas Gerais, which alleged irregular outsourcing practices and demanded collective punitive damages. A judgment was rendered on April 16, 2008, in which the acting judge ruled the Labor Public Prosecutors' Office claims as partially valid, recognizing irregular outsourcing and granting collective punitive damages. An appeal was filed but was dismissed on July 13, 2009. In order to obtain staying effects for its appeal, TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization) filed an unspecified writ of prevention, which was dismissed without prejudice. In order to reverse the decision of the Regional Labor Court of the Third Region, TIM Celular (now TIM S.A.) filed an appeal alleging abusive acts by the judge with the Superior Labor Court, and obtained a favorable decision, which reversed the appellate court's decision. A motion for clarification was filed, but dismissed. On September 16, 2009, a motion to review was filed, which is currently pending judgment by the Higher Labor Court. The case is suspended since 2015, due a STF decision applicable to all call centers' outsourcing claims of telecommunications companies.

Following the above mentioned public civil action in Minas Gerais, the Labor Public Prosecutor's Office of the Federal District filed a claim alleging irregular outsourcing practices and demanding collective punitive damages. The action was found to be without merit, with the court ruling that under the General Telecommunications Law, all outsourcing in the telecommunications sector is legal. The Labor Public Prosecutor's Office filed an ordinary appeal with the Regional Labor Court of the Tenth Region in March 2010, but the ruling of the lower court was upheld. Thereafter, the Labor Public Prosecutor's Office filed for a review, which is pending a hearing by the by the Higher Labor Court. The case is suspended, due to a pending appeal of a STF decision applicable to all call centers' outsourcing claims of telecommunications companies.

A group of actions have been filed in the state of Paraná, involving claims for damages in connection with contractual provisions set forth in employees' work cards. According to an internal rule, TELEPAR had undertaken to supplement the retirement benefits of employees hired prior to 1982. Prior to its privatization, TELEPAR had proposed to implement this benefit by means of the payment of a certain amount in cash. However, some of the company's former employees have questioned this transaction, and in some cases have obtained favorable decisions.

There are a series of labor claims, particularly in São Paulo, brought by former Gazeta Mercantil employees who have filed claims requesting the inclusion of Holdco (the former controlling shareholder of Intelig) or TIM Participações as defendants, claiming damages from Holdco and TIM Participações. Plaintiffs who have filed the claims were employees of Gazeta Mercantil, without any employment ties to Holdco or TIM Participações. However, prior to the merger with TIM Participações, Holdco belonged to the Docas economic group, of which Gazeta Mercantil is part.

Social Security Claims

In São Paulo, TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization) received a debit assessment notice referring to alleged irregularity in the payment of social security contributions in connection with the payment of profit sharing in the amount of R\$538 thousand as of December 31, 2018 (R\$4,995 thousand as of December 31, 2017). TIM Celular (now TIM S.A.) filed its administrative defense, but on September 16, 2009, a decision was rendered which upheld the assessment notice. An administrative appeal was filed on October 5, 2009, the judgment of which is still pending.

In May 2006, TIM Celular (now TIM S.A.) was issued a tax assessment notice in the amount of R\$9,693 thousand as of December 31, 2018 (R\$9,868 thousand as of December 31, 2017) for social security contributions that were allegedly due in connection with the following: (1) hiring bonuses (2) non-adjusted bonuses (3) payments to self-employed persons, and (4) sales incentives. TIM Celular (now TIM S.A.) filed an administrative defense but the tax assessment was upheld. TIM Celular (now TIM S.A.) filed an appeal with the Ministry of Finance's Taxpayers' Council, which is now pending judgment.

Intelig (now TIM S.A.) in Rio de Janeiro received notifications for the release of tax debt regarding alleged irregularities in the payment of social security contributions levied in connection with the following: (1) profit sharing, (2) retention of 11% on service agreements, (3) failure to deduct and pay management fees, and (4) failure to properly fill out the GFIP. An administrative defense was presented, with an unfavorable outcome. Intelig (now TIM S.A.) filed an appeal with the taxpayers' commission of the ministry of finance, which is currently pending judgment. Based on the final decision in the administrative proceedings with respect to the assessment for 11% withholding on service agreements, a legal action, with the amount of R\$36,685 thousand as of December 31, 2018, with no corresponding figure in December 2017.

Tax Claims

Federal Taxes

The total federal tax claims, not including regulatory taxes (FUST/FUNTTEL/FISTEL and other) assessed against the Company is equal to R\$3,952,125 thousand as of December 31, 2018 (R\$3,752,877 thousand as of December 31, 2017).

The amounts relating to federal taxes where the risk of loss is considered probable is R\$82,033 thousand as of December 31, 2018 (R\$33,907 thousand as of December 31, 2017). The amounts relating to federal taxes where the risk of loss is considered possible is R\$16,530,061 thousand as of December 31, 2018 (R\$14,528,617 thousand as of December 31, 2017).

The most relevant claims assessed are:

- Tax carryforward loss (CIT) and negative basis of Social Contribution on Profits (CSLL) compensation disallowance; challenge to the goodwill expenses deduction; disallowance of WHT compensation due to and alleged lack of documental support; lack of payment of CIT/CSLL due on a monthly estimate basis; fine for failure to present digital files; failure to formal requirement and compliance procedures related to Regional Tax Incentives (SUDENE). The amount in controversy, classified as a possible contingency, is R\$2,543,851 thousand as of December 31, 2018 (R\$2,552,068 thousand as of December 31, 2017).
- Alleged improper credits that resulted in tax carryforward losses and CSLL negative basis compensation disallowance. The amount in controversy, classified as a possible contingency, is R\$198,175 thousand as of December 31, 2018 (R\$192,417 thousand as of December 31, 2017).
- Social contribution on net income on exchange variation resulting from swap operations accounted for on a cash basis. The amount in controversy, classified as a possible contingency, is R\$64,537 thousand as of December 31, 2018 (R\$62,312 thousand as of December 31, 2017).
- Withholding tax collection on income of residents abroad, including those remitted as international roaming and payment to unidentified beneficiaries, as well as the payment of CIDE on royalties remittances abroad, including international roaming. The amount in controversy, classified as a possible contingency, is R\$296,589 thousand as of

December 31, 2018 (R\$241,431 thousand as of December 31, 2017 regarding TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization) and R\$56,469 thousand regarding TIM S.A.).

- Alleged failure to calculate and collect corporate income tax, PIS/COFINS and social contribution on profits due to total or partial disregard, by the Brazilian Internal Revenue Service (*Receita Federal do Brasil*), of the compensations proceeded and from CIT negative balance calculated on previous years. The amount in controversy, classified as a possible contingency, is R\$412,715 thousand as of December 31, 2018 (R\$396,103 thousand as of December 31, 2017).

State Taxes

The total state tax claims assessed against the Company is equal to R\$8,929,590 thousand as of December 31, 2018 (R\$7,407,881 thousand as of December 31, 2017). The amounts relating to state tax disputes where the risk of loss is considered probable is R\$103,546 thousand as of December 31, 2018 (R\$59,403 thousand as of December 31, 2017).

The most relevant claims assessed are:

- Alleged incorrect deduction of unconditional discounts offered to customers in the ICMS basis of calculation, as well as penalties for alleged noncompliance with an accessory obligation. The amount in controversy, classified as a possible contingency, is R\$1,344,288 thousand as of December 31, 2018 (R\$1,245,965 thousand as of December 31, 2017).
- Use of tax benefit (Program for the Economic, Integrated and Sustainable Development of the Federal District – PRO-DF) granted by the state tax authority, which was later declared unconstitutional by the STF. Additionally, the Company was assessed due to alleged undue credit of ICMS resulting from interstate purchase of goods with tax benefit granted in the state of origin. The amount in controversy, classified as a possible contingency, is R\$1,110,827 thousand as of December 31, 2018 (R\$1,055,667 as of December 31, 2017).
- ICMS credits reversal and credits arising from the acquisition of fixed assets. The amount in controversy, classified as a possible contingency, is R\$767,142 thousand as of December 31, 2018 (R\$784,654 thousand regarding TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization) and R\$19,950 thousand regarding TIM S.A. as of December 31, 2017).
- ICMS credit entries and debt reversals, identification and documentation support of amounts and information included in clients' bills, such as the tax rate and credits granted, as well as credits arising from ICMS substitution or nontaxable operations. The amount in controversy, classified as a possible contingency, is R\$3,340,448 thousand as of December 31, 2018 (R\$1,698,409 thousand regarding TIM Celular (which has been merged into TIM S.A. in connection with the Reorganization) and R\$128,875 thousand regarding TIM S.A. as of December 31, 2017).
- Appropriation of ICMS credits originated from operational energy consumption and acquisition. The amount in controversy, classified as a possible contingency, is R\$140,368 thousand as of December 31, 2018 (R\$131,625 thousand as of December 31, 2017).
- Incidence of ICMS and the State Poverty Fund (*Fundo Estadual de Combate à Pobreza – FECOP*), on the acquisition of fixed assets and on telecommunication services provided in specific cases set forth in local legislation. The amount in controversy, classified as a possible contingency, is R\$179,853 thousand as of December 31, 2018 (R\$175,729 thousand as of December 31, 2017).
- Alleged conflict between the information filed in the accessory obligations and the tax collection as well as the charge of specific penalty for noncompliance with those obligations. The amount in controversy, classified as a possible contingency, is R\$116,880 thousand as of December 31, 2018 (R\$253,443 thousand as of December 31, 2017).
- Alleged non-payment of ICMS due to the loss of reversed debits related to prepaid service, as well as alleged undue ICMS credit on goods alleged to have benefited from reduction in the calculation basis. The amount in controversy, classified as a possible contingency, is R\$192,074 thousand as of December 31, 2018 (R\$149,425 thousand as of December 31, 2017).

- ICMS credits entries regarding the tax treatment of handsets loan operations. The amount in controversy, classified as a possible contingency, is R\$177,128 thousand as of December 31, 2018 (R\$185,526 thousand as of December 31, 2017).
- Charge of ICMS related to subscription services excluded from taxation due to its classification as non-telecommunication services. The amount in controversy, classified as a possible contingency, is R\$139,758 thousand as of December 31, 2018 (R\$112,848 thousand as of December 31, 2017).

Municipal Taxes

The total municipal tax claims assessed against the Company is equal to R\$693,616 thousand as of December 31, 2018 (R\$658,783 thousand as of December 31, 2017). The amounts relating to municipal taxes where the risk of loss is considered probable is R\$1,713 thousand as of December 31, 2018 (R\$1,738 thousand as of December 31, 2017).

The most relevant claims assessed are:

- Alleged lack of ISS collection regarding services import. The amount in controversy, classified as a possible contingency, is R\$142,355 thousand as of December 31, 2018 (R\$136,732 thousand as of December 31, 2017).
- Charge of ISS tax and penalties due to the supposed lack of collection over the Company's revenue accounts. The amount in controversy, classified as a possible contingency, is R\$283,620 thousand as of December 31, 2018 (R\$269,547 thousand as of December 31, 2017).
- Constitutionality of the collection of the Inspection Fee for Operation (*Taxa de Fiscalização de Funcionamento* – TFF) by municipal authorities of different locations. The amount in controversy, classified as a possible contingency, is R\$118,114 thousand as of December 31, 2018 (R\$107,519 thousand as of December 31, 2017).

FUST and FUNTTEL

The total amount assessed against the Company is R\$2,979,404 thousand as of December 31, 2018 (R\$2,709,076 thousand as of December 31, 2017).

The main discussion involves the collection of FUST and FUNTTEL followed by a discussion of the issuance by ANATEL of Ordinance No. 07/2005, specifically aiming at the collection of these contributions on interconnection revenues earned by telecommunications services providers from the date upon which Law No. 9,998/2000 came into force.

Material Proceedings with Adverse Director, Management or Affiliate

None.

Dividend Policy

Under our Bylaws, we are required to distribute an aggregate amount equal to at least 25% of our adjusted net income to our shareholders, either as dividends or as tax-deductible interest on shareholders' equity. We may also make additional distributions to the extent of available distributable profits and reserves. Our subsidiary TIM S.A. is also subject to mandatory distribution requirements and, to the extent of distributable profits and reserves, is accordingly required to pay dividends to us. All of the aforementioned distributions may be made as dividends or as tax-deductible interest on shareholders' equity.

Brazilian corporations may make payments to shareholders characterized as interest on shareholders' equity (*juros sobre capital próprio*) as an alternative form of making dividend distributions to the shareholders. The rate of interest may not be higher than the Federal Government's long-term interest rate as determined by BNDES from time to time. Dividends are not subject to withholding income tax when paid. On the other hand, interest on shareholders' equity paid to shareholders is deductible from the corporation's net income for tax purposes, but the distributions are subject to withholding tax.

For the purposes of Brazilian corporate law, and in accordance with our Bylaws, adjusted net income is an amount equal to net profit adjusted to reflect allocations to and from:

- the legal reserve; and
- contingency reserves.

We are required to maintain a legal reserve to which we must allocate 5% of net income for each fiscal year until the amount for such reserve equals 20% of our capital. However, we are not required to make any allocations to our legal reserve in respect of any fiscal year in which our legal reserve, together with our other capital reserves, exceeds 30% of our capital. Losses, if any, may be charged against the legal reserve.

Brazilian corporate law also provides for two discretionary allocations of net income that are subject to approval by the shareholders at the annual meeting. First, a percentage of net income may be allocated to a contingency reserve for anticipated losses that are deemed probable in future years. Any amount so allocated in a prior year must be either reversed in the fiscal year in which the loss was anticipated if such loss does not in fact occur, or written off in the event that the anticipated loss occurs. Second, if the mandatory distributable amount exceeds the sum of realized net income in a given year, such excess may be allocated to unrealized revenue reserve. Under Brazilian corporate law, realized net income is defined as the amount of net income that exceeds the net positive result of equity adjustments and profits or revenues from operations with financial results after the end of the next succeeding fiscal year.

Under Brazilian corporate law, any company may, as a term in its Bylaws, create a discretionary reserve that authorizes the allocation of a percentage of a company's net income to the discretionary reserve and must also indicate the purpose, criteria for allocation and a maximum amount of the reserve. The Company's Bylaws authorize the allocation of the net income balance not allocated to the payment of the mandatory minimum dividend to a supplementary reserve for the expansion of corporate business, not to exceed 80% of the capital.

We may also allocate a portion of our net income for discretionary appropriations for plant expansion and other capital investment projects, the amount of which would be based on a capital budget previously presented by our management and approved by shareholders. Under Brazilian corporate law, capital budgets covering more than one year must be reviewed at each annual shareholders' meeting. After completion of the relevant capital projects, we may retain the appropriation until the shareholders vote to transfer all or a portion of the reserve to capital realized.

The amounts available for distribution may be further increased by a decrease in the contingency reserve for anticipated losses anticipated in prior years but not realized. The amounts available for distribution are determined on the basis of financial statements prepared in accordance with IFRS.

The legal reserve is subject to approval by the shareholders voting at the annual meeting and may be transferred to capital but is not available for the payment of dividends in subsequent years. Our calculation of net income and allocations to reserves for any fiscal year are determined on the basis of financial statements prepared in accordance with CVM rules and Brazilian corporate law.

Under Brazilian corporate law, a company is permitted to suspend the mandatory dividend in respect of common shares not entitled to a fixed or minimum dividend if:

- its management (board of directors and board of statutory officers) and fiscal council report to the shareholders' meeting that the distribution would be incompatible with the financial circumstances of that company; and
- the shareholders ratify this conclusion at the shareholders' meeting.

In this case,

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- the management must forward to CVM within five days of the shareholders' meeting an explanation justifying the information transmitted at the meeting; and
- the profits which were not distributed are to be recorded as a special reserve and, if not absorbed by losses in subsequent fiscal years, are to be paid as dividends as soon as the financial situation permits.

For the purposes of Brazilian corporate law, 25% of the net income after income tax and social contribution for such fiscal year, net of any accumulated losses from prior fiscal years and any amounts allocated to warrants and employees' and management's participation in a company's profits, shall be distributed as dividends.

Payment of Dividends

We are required by law and by our Bylaws to hold an annual shareholders' meeting by April 30 of each year, at which, among other things, an annual dividend may be declared by decision of our shareholders on the recommendation of our statutory officers, as approved by our Board of Directors. The payment of annual dividends is based on the financial statements prepared for the fiscal year ending December 31. Under Brazilian corporate law, dividends are required to be paid within 60 days following the date the dividend is declared to shareholders of record on such declaration date, unless a shareholders' resolution sets forth another date of payment, which in any event shall occur prior to the end of the fiscal year in which such dividend was declared.

A shareholder has a three-year period from the dividend payment date to claim dividends in respect of its shares, after which we have no liability for such payment. Because our shares are issued in book-entry form, dividends with respect to any share are credited to the account holding such share. We are not required to adjust the amount of paid-in capital for inflation. Annual dividends may be paid to shareholders on a pro rata basis according to the date when the subscription price is paid to us.

B. Significant Changes

None.

Item 9. The Offer and Listing

A. Offer and Listing Details

Our common shares are listed on the *Novo Mercado* segment of the São Paulo Stock Exchange (*B3 S.A. – Brasil, Bolsa, Balcão*), or the B3, under the symbol “TIMP3” and our ADSs are listed on the New York Stock Exchange, or the NYSE, under the symbol “TSU.” The table below sets forth, for the indicated periods, the high and low closing prices of the ADSs on the NYSE, in U.S. dollars, and the common shares on the B3, in *reais*. On December 31, 2018, the last reported sales price of our common shares on the B3 was R\$11.70 and on December 31, 2018, the last reported sales price of our ADSs on the NYSE was U.S.\$15.14. As of December 31, 2018, the U.S. dollar-*real* exchange rate was R\$3.8748 per U.S.\$1.00.

Year ended	NYSE		B3 S.A. – BRASIL, BOLSA, BALCÃO	
	High	Low	High	Low
	(in U.S.\$ per ADS)		(in reais per common share)	
December 31, 2014	30.16	21.51	13.83	10.49

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December 31, 2015	24.38	8.44	12.88	6.56
December 31, 2016	13.85	7.12	8.86	5.68
December 31, 2017	19.43	12.30	13.10	7.73
December 31, 2018	22.93	14.32	15.95	11.04

Year ended December 31, 2017

First quarter	16.70	12.30	10.30	7.73
Second quarter	16.56	13.75	10.46	9.30
Third quarter	19.07	14.89	12.01	9.85
Fourth quarter	19.43	17.34	13.10	11.45

Year ended December 31, 2018

First quarter	22.49	19.52	14.74	12.66
Second quarter	22.93	16.55	15.95	12.63
Third quarter	17.64	14.34	13.60	11.35
Fourth quarter	19.22	14.32	12.41	11.04

Month ended

October 31, 2018	19.22	18.08	12.34	11.56
November 30, 2018	16.43	14.32	12.41	11.04
December 31, 2018	15.65	14.44	12.33	11.35
January 31, 2019	17.55	15.14	12.99	11.70
February 29, 2019	17.06	15.36	12.62	11.60
March 31, 2019	16.96	14.71	12.80	11.41
April 2019 (through April 9, 2019)	16.24	15.10	12.48	11.67

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At an extraordinary shareholders meeting held on June 22, 2011 our shareholders approved, among other things: (1) the conversion of all of our preferred shares into common shares, at a ratio of 0.8406 common shares for each preferred share; (2) our adherence to the *Novo Mercado* rules and the transfer of trading of the shares issued by us to the *Novo Mercado*, and (3) amendments to our Bylaws.

In order to join the *Novo Mercado*, we entered into a *Novo Mercado* Participation Agreement with the B3. Through this agreement, which became effective on July 27, 2011, we are required to comply with heightened requirements relating to corporate governance and the disclosure of information to the market. Additionally, as of such date, our shares started trading on the *Novo Mercado* segment of the B3. Pursuant to the *Novo Mercado* Regulations, we are not permitted to issue preferred shares, participation bonuses or any kind of shares with restricted voting rights.

Prior to August 2, 2011 we had common shares and preferred shares listed on the B3 under the symbols “TCSL3” and “TCSL4,” respectively. Our ADSs listed on the NYSE each represented 10 preferred shares. As part of our migration to the *Novo Mercado* listing segment of the B3, our preferred shares ceased to trade on August 2, 2011. On August 4, 2011, our ADSs representing preferred shares ceased to trade on the NYSE. From August 3, 2011, we only had common shares traded on the *Novo Mercado* listing segment of the B3, by using the symbol “TIMP3” and as from August 5, 2011, our ADSs representing five common shares instead of ten preferred shares commenced trading on the NYSE.

B. Plan of Distribution

Not applicable.

C. Markets

Our common shares are listed on the *Novo Mercado* segment of the B3 S.A. – Brasil, Bolsa, Balcão, under the symbol “TIMP3” and our ADSs are listed on the New York Stock Exchange, or the NYSE, under the symbol “TSU.” For additional detail, see “—A. Offer and Listing Details.”

Trading on the Brazilian Stock Exchanges

B3 S.A. – Brasil, Bolsa, Balcão

The B3 is the only Brazilian Stock Exchange on which equity and debt securities issued by Brazilian companies are traded.

Trading on the B3 is conducted every business day, from 10:00 a.m. to 5:00 p.m., or from 11:00 a.m. to 6:00 p.m. during daylight saving time in Brazil, on an electronic trading system called “PUMA.” Trading is also conducted between 6:00 p.m. and 7:30 p.m., or between 7:00 p.m. and 8:30 p.m. during daylight savings time in Brazil, in an after-market system. The “after-market” trading is the scheduled after the close of principal trading sessions, when investors may send purchase and sell orders and make trades through the home broker system. This after-market trading is subject to regulatory limits on price volatility of securities traded by investors operating on the Internet.

When shareholders trade shares or units on the B3, the trade is settled in three business days after the trade date, without adjustments to the purchase price. The seller is ordinarily required to deliver the shares or units to the exchange on the second business day following the trade date. Delivery of and payment for shares or units are made through the facilities of *Central Depositária of B3* clearing house.

In order to maintain control over the fluctuation of the B3 index, B3 has adopted a “circuit breaker” system pursuant to which trading sessions may be suspended for a period of 30 minutes or one hour whenever the B3 index falls below 10% or 15%, respectively, in relation to the closing index levels of the previous trading session. The B3 also implemented a 15% limit, up or down, on price fluctuations in shares traded on the spot market. The minimum and maximum price is based on a reference price for each asset, which will be the previous session’s closing quote, when considering the asset at the beginning of the day before the first trade, or the price of the day’s first trade. The asset’s reference price will be altered during the session if there is an auction sparked by the intraday limit being breached. In this case the reference price will become whatever results from the auction.

Although the Brazilian equity market is Latin America’s largest in terms of market capitalization, it is smaller and less liquid than the major U.S. and European securities markets. Moreover, the B3 is less liquid than the New York Stock Exchange and other major exchanges in the world. Although any of the outstanding shares of a listed company may trade on a Brazilian stock exchange, in most cases fewer than half of the listed shares are actually available for trading by the public, the remainder being held by small groups of controlling persons, governmental entities or one principal shareholder. Trading on Brazilian stock exchanges by non-residents of Brazil is subject to registration procedures.

Trading on Brazilian stock exchanges by a holder not deemed to be domiciled in Brazil, for Brazilian tax and regulatory purposes (a “non-Brazilian holder”), is subject to certain limitations under Brazilian foreign investment legislation. With limited exceptions, non-Brazilian holders may only trade on Brazilian stock exchanges in accordance with the requirements of Resolution CMN 4,373 (that replaced Resolution CMN 2,689). Resolution CMN 4,373 (that replaced Resolution CMN 2,689) requires that securities held by non-Brazilian holders be maintained in the custody of, or in deposit accounts with, financial institutions and be registered with a clearinghouse duly authorized by the Central Bank and the CVM. In addition, Resolution CMN 4,373 (that replaced Resolution CMN 2,689) requires non-Brazilian holders to restrict their securities trading to transactions on Brazilian stock exchanges or qualified over-the-counter markets. With limited exceptions, non-Brazilian holders may not transfer the ownership of investments made under Resolution CMN 4,373 (that replaced Resolution CMN 2,689) to other non-Brazilian holders through a private transaction. See “Item 10. Additional Information—E. Taxation—Brazilian Tax Considerations” for a description of certain tax benefits extended to non-Brazilian holders who qualify under Resolution CMN 4,373 (that replaced Resolution CMN 2,689).

Differentiated Levels of Corporate Governance and the Novo Mercado

In order to increase the transparency of the Brazilian capital markets and protect minority shareholders' rights, the B3 has implemented certain new initiatives, including:

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- a classification system referred to as “Differentiated Levels of Corporate Governance” applicable to the companies already listed on the B3; and
- a new separate listing segment for qualifying issuers referred to as the *Novo Mercado*.

The Differentiated Levels of Corporate Governance, Basic Levels, Level 1 and Level 2, are applicable to listed companies that voluntarily comply with special disclosure and corporate governance practices established by the B3. The companies may be classified into different levels, depending on their degree of adherence to the B3’s practices of disclosure and corporate governance.

The *Novo Mercado* is a separate listing segment for the trading of shares issued by companies that voluntarily adopt certain additional corporate governance practices and disclosure requirements which are more demanding than those required by the current law in Brazil. Companies may qualify to have their shares traded in the *Novo Mercado*, if, in addition to complying with the Level 2 corporate governance practices referred to above, their capital stock consists only of voting common shares.

Below we highlight some of corporate governance practices required by the *Novo Mercado* listing segment of the B3:

- only common shares, with voting rights;
- 100% tag along, with the same conditions for all shareholders in transfer of control;
- establishment and maintenance of Internal Audit, Compliance Department and Audit Committee (statutory or non-statutory);
- public offer required in case of delisting from Novo Mercado;
- at least two or 20% of board members must be independent (whichever is greater);
- listed companies’ commitment to maintain a free float of at least 25% or 15%, in case of an average daily trading volume above R\$25 million.

On May 20, 2011 the Board of Directors of TIM Participações recommended to the Extraordinary General Shareholders’ Meeting of the Company its migration to the *Novo Mercado* listing segment of the B3 (at that time, the *BM&FBOVESPA S.A. – Bolsa de Valores, Mercadorias e Futuros*), which took place on June 22, 2011. With this migration TIM moved to the highest level of corporate governance. Only 33% of Brazilian listed companies are in the Novo Mercado and TIM is the only telecommunications company stock among them.

B3 Market Arbitration Panel

Pursuant to Law No. 9,307/96, a Market Arbitration Panel, or the Panel, has been established by the B3. The Panel was established to settle certain types of disputes, including disputes relating to corporate governance, securities issues, financial regulatory issues and other capital market matters, with respect to B3 listed companies that have undertaken to voluntarily comply with Level 2 and *Novo Mercado* levels of corporate governance and disclosure. The Panel will provide a forum for dispute resolution involving, among others, the B3, the applicable listed company and the shareholders, directors and management of the applicable listed company.

Regulation of Brazilian Securities Markets

The Brazilian securities markets are principally governed by Law No. 6,385, of December 7, 1976, and Brazilian corporate law, each as amended and supplemented, and by regulations issued by the CVM, which has authority over stock exchanges and the securities markets in general; the National Monetary Council; and the Central Bank, which has, among other powers, licensing authority over brokerage firms and regulates foreign investment and foreign exchange transactions.

These laws and regulations, among others, provide for licensing and oversight of brokerage firms, governance of the Brazilian stock exchanges, disclosure requirements applicable to issuers of traded securities, restrictions on price manipulation and protection of minority shareholders. They also provide for restrictions on insider trading. Accordingly, any trades or transfers of our equity securities by our officers and directors, our controlling shareholders or any of the officers and directors of our controlling shareholders must comply with the regulations issued by the CVM.

Under Brazilian corporate law, a corporation is either publicly held (*companhia aberta*), as we are, or closely held (*companhia fechada*). All publicly held companies are registered with the CVM and are subject to reporting requirements. We have the option to ask that trading in securities on the B3 be suspended in anticipation of a material announcement. Trading may also be suspended on the initiative of the B3 or the CVM, based on or due to, among other reasons, a belief that a company has provided inadequate information regarding a material event or has provided inadequate responses to inquiries by the CVM or the B3.

The Brazilian over-the-counter market consists of direct trades between individuals in which a financial institution registered with the CVM serves as intermediary. No special application, other than registration with the CVM, is necessary for securities of a public company to be traded in this market. The CVM requires that it be given notice of all trades carried out in the Brazilian over-the-counter market by the respective intermediaries.

Trading on the B3 by non-residents of Brazil is subject to limitations under Brazilian foreign investment and tax legislation. The Brazilian custodian for our common shares on behalf of the depositary for the ADSs, has obtained registration from the Central Bank to remit U.S. dollars abroad for payments of dividends, any other cash distributions, or upon the disposition of the shares and sales proceeds thereto. In the event that a holder of ADSs exchanges common shares for ADSs, the holder will be entitled to continue to rely on the custodian's registration for five business days after the exchange. Thereafter, the holder may not be able to obtain and remit U.S. dollars abroad upon the disposition of our common shares or upon distributions relating to our common shares, unless the holder obtains a new registration. See "Item 10. Additional Information—B. Memorandum and Articles of Association."

Brazilian regulations also require that any person or group of persons representing the same interest that has directly or indirectly acquired an interest corresponding to 5% of a type or class of shares of a publicly traded company must provide such publicly traded company with information on such acquisition and its purpose, and such company must transmit this information to the CVM. If this acquisition causes a change in the corporate control or in the administrative structure of the company, as well as when such acquisition triggers the obligation of making a public offering in accordance with CVM Instruction 358/03, then the acquiring entity shall disclose this information to the applicable stock exchanges and the appropriate Brazilian newspapers. Regulations also require disclosure of any subsequent increase or decrease of 5% or more in ownership of common shares, including warrants and debentures convertible into common shares in the same terms above.

Trading on the New York Stock Exchange

We are a "controlled company" and a "foreign private issuer" within the meaning of the NYSE corporate governance standards. Under the NYSE rules, a controlled company is exempt from certain NYSE corporate governance requirements. In addition, a foreign private issuer may elect to comply with the practice of its home country and not to comply with certain NYSE corporate governance requirements, including the requirements that (1) a majority of the board of directors consist of independent directors, (2) a nominating and corporate governance committee be established that is composed entirely of independent directors and has a written charter addressing the committee's purpose and responsibilities, (3) a compensation committee be established that is composed entirely of independent directors and has a written charter addressing the committee's purpose and responsibilities and (4) an annual performance evaluation of the nominating and corporate governance and compensation committees be undertaken.

Although we have similar practices, they do not entirely conform to the NYSE requirements, therefore, we currently use these exemptions and intend to continue using them.

Code of Business Conduct and Ethics

Although adoption of a code of ethics is not required by Brazilian Corporate Law, we implemented not only a code of ethics regulating the conduct of our managers in connection with the registration and control of financial and accounting information and their access to privileged and nonpublic information and data to comply with the requirements of Sarbanes-Oxley and NYSE rules, but also trainings and e-learnings to guarantee the understanding by the leadership. See “Item 16B. Code of Ethics.”

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the issue

Not applicable.

Item 10. Additional Information

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

The following summarizes certain material provisions of TIM's Bylaws and the Brazilian corporate law, the main bodies of regulation governing us. Copies of TIM's Bylaws have been filed as exhibits to this annual report on Form 20-F. Except as described in this section, TIM's Bylaws do not contain provisions addressing the duties, authority or liabilities of the directors and senior management, which are instead established by Brazilian corporate law.

Registration

TIM's Bylaws have been registered with the Public Registry of the state of Rio de Janeiro under company number (NIRE) 33.3.0027696-3.

Corporate Purpose

Article 2 of our Bylaws provides that our corporate purpose is to: (1) hold interest in the capital of companies that explore any type of telecommunications services, under the terms and conditions provided for in the relevant permits, authorizations or concessions, companies that develop activities that are necessary or useful to the provision of such services, or companies that provide Internet connection services, Value-Added Services and Internet application services; (2) promote, through its controlled or affiliated companies, the expansion and implementation of any type of telecommunications services, under the terms and conditions provided for in the relevant permits, authorizations or concessions; (3) promote, perform or give guidance in relation to the borrowing of funds from internal and external sources to be invested by the Company or by its controlled companies; (4) promote and incentivize study and research activities for the development of any type of telecommunications services, as well as of Internet connection services, other Value-Added Services and Internet application services; (5) provide, directly or through controlled or affiliated companies, services related to the telecommunications industry; (6) promote, incentivize and coordinate, through controlled or affiliated companies, the education and training of the staff required by the telecommunications industry in general; (7) perform or promote the importation of goods and services for the controlled or affiliated companies; (8) engage in any other activities related or akin to its purpose; and (9) hold interest in the corporate capital of other companies.

Company Management

According to our Bylaws, our Board of Directors is comprised of at least five and at most 19 permanent members. The following is a description of some of the provisions of our Bylaws concerning the Board of Directors:

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- the Board of Directors has the power to approve loans and financing as well as other transactions giving rise to indebtedness, for an amount exceeding R\$300 million, as set forth in Article 22, Item XIII;
- the Board of Directors has the power to allocate the total budget for management remuneration approved by the shareholders' meeting among the directors and the statutory officers, as necessary; and
- the Board of Directors has the power to authorize the Company, as well as its controlled companies and affiliates, to enter into, amend or terminate shareholders' agreements.

There are no provisions in the Bylaws with respect to:

- a director's power to vote on a proposal in which such director is materially interested;
- a director's power to vote compensation to him or herself in the absence of an independent quorum;
- borrowing powers exercisable by the directors;
- age limits for retirement of directors;
- required shareholding for director qualification; or
- disclosure of share ownership.

The statutory officers are the Company's representative and executive body, and each one of them shall act within his/her respective scope of authority. Following is a description of some of the provisions of our Bylaws concerning the Board of Statutory Officers:

- the power to authorize the participation of the Company or its companies controlled in any joint venture, partnership, consortium or any similar structure;
- the power to ratify, within the limits set forth in the Bylaws, the purchase of materials and equipment and the execution of property, construction work and service agreements; and
- the power to approve the contracting by the Company or by its controlled companies of loans, financing, or any other transactions implying indebtedness to the Company or its controlled companies, whose individual value is greater than R\$30.0 million, provided that certain provisions of the Bylaws are observed.

Rights Relating to Our Shares

Dividend Rights

Under our Bylaws, we are required to distribute an aggregate amount equal to at least 25% of our adjusted net income to our shareholders, either as dividends or as tax-deductible interest on shareholders' equity. We may also make additional distributions to the extent of available distributable profits and reserves. Our subsidiary TIM S.A. is also subject to mandatory distribution requirements and, to the extent of distributable profits and reserves, is accordingly required to pay dividends to us. All of the aforementioned distributions may be made as dividends or as tax-deductible interest on shareholders' equity.

Brazilian corporations may make payments to shareholders characterized as interest on shareholders' equity (*juros sobre capital próprio*) as an alternative form of making dividend distributions to the shareholders. The rate of interest may not be higher than the Federal Government's long-term interest rate as determined by BNDES from time to time. Dividends are not subject to withholding income tax when paid. On the other hand, interest on shareholders' equity paid to shareholders is deductible from the corporation's net income for tax purposes, but the distributions are subject to withholding tax.

For the purposes of Brazilian corporate law, and in accordance with our Bylaws, adjusted net income is an amount equal to net profit adjusted to reflect allocations to and from:

- the legal reserve; and
- contingency reserves.

We are required to maintain a legal reserve, to which we must allocate 5% of net income for each fiscal year until the amount for such reserve equals 20% of our capital. However, we are not required to make any allocations to our legal reserve in respect of any fiscal year in which our legal reserve, together with our other capital reserves, exceeds 30% of our capital. Losses, if any, may be charged against the legal reserve.

Brazilian corporate law also provides for two discretionary allocations of net income that are subject to approval by the shareholders at the annual meeting. First, a percentage of net income may be allocated to a contingency reserve for anticipated losses that are deemed probable in future years. Any amount so allocated in a prior year must be either reversed in the fiscal year in which the loss was anticipated if such loss does not in fact occur, or written off in the event that the anticipated loss occurs. Second, if the mandatory distributable amount exceeds the sum of realized net income in a given year, such excess may be allocated to unrealized revenue reserve. Under Brazilian corporate law, realized net income is defined as the amount of net income that exceeds the net positive result of equity adjustments and profits or revenues from operations with financial results after the end of the next succeeding fiscal year.

Under Brazilian corporate law, any company may, as a term in its Bylaws, create a discretionary reserve that authorizes the allocation of a percentage of a company's net income to the discretionary reserve and must also indicate the purpose, criteria for allocation and a maximum amount of the reserve. The Company's Bylaws authorize the allocation of the net income balance not allocated to the payment of the mandatory minimum dividend to a supplementary reserve for the expansion of corporate business, not to exceed 80% of the capital.

We may also allocate a portion of our net income for discretionary appropriations for plant expansion and other capital investment projects, the amount of which would be based on a capital budget previously presented by our management and approved by shareholders. Under Brazilian corporate law, capital budgets covering more than one year must be reviewed at each annual shareholders' meeting. After completion of the relevant capital projects, we may retain the appropriation until the shareholders vote to transfer all or a portion of the reserve to capital realized.

The amounts available for distribution may be further increased by a decrease in the contingency reserve for anticipated losses anticipated in prior years but not realized. The amounts available for distribution are determined on the basis of financial statements prepared in accordance with IFRS.

The legal reserve is subject to approval by the shareholders voting at the annual meeting and may be transferred to capital but is not available for the payment of dividends in subsequent years. Our calculation of net income and allocations to reserves for any fiscal year are determined on the basis of financial statements prepared in accordance with CVM rules and IFRS.

Under Brazilian corporate law, a company is permitted to suspend the mandatory dividend in respect of common shares not entitled to a fixed or minimum dividend if:

- its management (Board of Directors and Board of Statutory Officers) and Fiscal Council report to the shareholders' meeting that the distribution would be incompatible with the financial circumstances of that company; and
- the shareholders ratify this conclusion at the shareholders' meeting.

In this case,

- the management must forward to CVM within five days of the shareholders' meeting an explanation justifying the information transmitted at the meeting; and
- the profits which were not distributed are to be recorded as a special reserve and, if not absorbed by losses in subsequent fiscal years, are to be paid as dividends as soon as the financial situation permits.

For the purposes of Brazilian corporate law, 25% of the net income after income tax and social contribution for such fiscal year, net of any accumulated losses from prior fiscal years and any amounts allocated to warrants and employees' and management's participation in a company's profits, shall be distributed as dividends.

Payment of Dividends

We are required by law and by our Bylaws to hold an annual shareholders' meeting by April 30 of each year, at which, among other things, an annual dividend may be declared by decision of our shareholders on the recommendation of our statutory officers, as approved by our Board of Directors.

The payment of annual dividends is based on the financial statements prepared for the fiscal year ending December 31. Under Brazilian corporate law, dividends are required to be paid within 60 days following the date the dividend is declared to shareholders of record on such declaration date, unless a shareholders' resolution sets forth another date of payment, which in any event shall occur prior to the end of the fiscal year in which such dividend was declared.

A shareholder has a three-year period from the dividend payment date to claim dividends in respect of its shares, after which we have no liability for such payment. Because our shares are issued in book-entry form, dividends with respect to any share are credited to the account holding such share. We are not required to adjust the amount of paid-in capital for inflation. Annual dividends may be paid to shareholders on a pro rata basis according to the date when the subscription price is paid to us.

Voting Rights

Each common share entitles the holder to one vote at meetings of shareholders.

Meeting of Shareholders

According to Brazilian law, shareholders must be previously notified through a notice published three times in Brazilian official gazettes in order for an annual or extraordinary shareholders' meeting to be held. The notification must occur at least 15 days prior to the meeting scheduled date. If the meeting so noticed is not held for any reason on first notice, a second notification must be published at least eight days before the second meeting date.

On the first notice, meetings may be held only if shareholders holding at least one-fourth of voting shares are represented. Extraordinary meetings for the amendment of the Bylaws may be held on the first notice only if shareholders holding at least two-thirds of the voting capital are represented. On a second call, the meetings are held regardless of quorum.

Pursuant to our Bylaws and Brazilian corporate law, shareholders at our annual shareholders' meeting, which is required to be held within the first four months following the end of the fiscal year, will convene to:

- take the management accounts; examine, discuss and vote on the financial statements;
- decide on the uses to which the net income of the fiscal year should be put and on the distribution of dividends; and
- elect the members of the Fiscal Council and, when applicable, the members of the Board of Directors.

An extraordinary shareholders' meeting shall be convened whenever the Company interests so require. Pursuant to our Bylaws and Brazilian corporate law, the following actions, among others, are exclusive powers of the shareholders'

meeting:

- to amend the Bylaws;
- to decide on the appraisal of assets given by shareholders to pay up capital stock;

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- to decide on the Company's transformation, merger, takeover and split-up; its dissolution and liquidation; to appoint and remove liquidators and appreciate their accounts;
- to suspend the rights of shareholders not in compliance with their duties imposed by law, the Bylaws or the *Novo Mercado* Listing Rules;
- to elect and remove, at any time, the members of the Board of Directors and the Fiscal Council;
- to determine the global or individual remuneration of the Board of Directors, Board of Statutory Officers and the Fiscal Council;
- to annually take the accounts of the management and decide on the submitted financial statements;
- to decide where the Company shall file a civil liability law suit against the management for losses in the Company's assets as provided by law;
- to resolve in compliance with all provisions of any law, the Bylaws or the *Novo Mercado* rules about capital stock increase by means of subscription of new shares, and on the issuance of any other bonds or securities, whether in Brazil or abroad and whenever the limit of the authorized capital has been attained;
- to decide on the withdrawal from the register of publicly held companies before the CVM;
- to decide on the delisting of the Company from the *Novo Mercado* listing segment;
- to choose a company to prepare an opinion concerning the appraisal of the Company's shares in the event of cancellation or delisting; and
- to previously approve the execution of loan agreements, management agreements and technical support services agreements, between the Company or its controlled companies, on the one side, and the controlling shareholder or its controlled companies, affiliated or under the same control or the controlling companies of the latter, or parties related to the Company, on the other side, after prior assessment of the Statutory Audit Committee to the effect that the terms and conditions of the agreement in question are in compliance with standards normally adopted in the market for transactions of the same nature between independent parties.

Preemptive Rights

Except in the case of a public offering of ordinary shares or convertible debentures, public subscription or a public tender offer (whereby such actions must be authorized by the Board of Directors in accordance with article 22, section II of the Bylaws), each of our shareholders has a general preemptive right to subscribe shares in any capital increase, in proportion to its shareholding. A minimum period of 30 days following the publication of notice of the capital increase is allowed for the exercise of the right, and the right is transferable.

Preemptive rights to purchase shares may not be offered to U.S. holders of the ADSs unless a registration statement under the Securities Act is effective with respect to the shares underlying those rights or an exemption from the registration requirements of the Securities Act is available. Consequently, if you are a holder of our ADSs who is a U.S. person or is located in the United States, you may be restricted in your ability to participate in the exercise of preemptive rights.

Right of Redemption

Subject to certain exceptions, the common shares are redeemable by shareholders exercising withdrawal rights in the event that shareholders representing over 50% of the voting shares adopt a resolution at a duly convened shareholders meeting to:

- reduce the mandatory distribution of dividends;

- change our corporate purpose;
- participate in a group of companies;
- transfer all of our shares to another company in order to make us a wholly owned subsidiary of that company;
- split up, subject to the conditions set forth by Brazilian corporate law;
- change corporate form;
- approve the acquisition of another company, the price of which exceeds certain limits set forth in Brazilian corporate law; or
- merge or consolidate ourselves with another company.

The redemption right expires 30 days after publication of the minutes of the relevant shareholders' meeting. The shareholders would be entitled to reconsider any action giving rise to redemption rights within 10 days following the expiration of those rights if they determine that the redemption of shares of dissenting shareholders would jeopardize our financial stability.

Brazilian corporate law excludes dissenters' rights in such cases for holders of shares that have a public float rate higher than 50% and that are "liquid." Shares are defined as being "liquid" for these purposes if they are part of the B3 Index or another stock exchange index (as defined by CVM). For as long as our shares are part of any qualifying market index, the right of redemption shall not be extended to our shareholders with respect to decisions regarding our merger or consolidation with another company, or the participation in a group of companies as defined by Brazilian corporate law. Currently, our common shares do not have a public float rate higher than 50%; accordingly, dissenter's withdrawal rights are applicable.

Unless otherwise provided in the Bylaws, which is not the case with us, a shareholder exercising rights to redeem shares is entitled to receive the book value of such shares, determined on the basis of the last annual balance sheet approved by the shareholders. If the shareholders' meeting giving rise to redemption rights occurs more than 60 days after the date of the last annual balance sheet, a shareholder may demand that its shares be valued on the basis of a new balance sheet that is as of a date within 60 days of such shareholders' meeting.

Form and Transfer

Our shares are maintained in book-entry form with a transfer agent, Banco Bradesco S.A., and the transfer of our shares is made in accordance with the applicable provision of the Brazilian corporate law, which provides that a transfer of shares is effected by an entry made by the transfer agent on its books, debiting the share account of the seller and crediting the share account of the purchaser, against presentation of a written order of the seller, or judicial authorization or order, in an appropriate document which remains in the possession of the transfer agent. The common shares underlying our ADS are registered on the transfer agent's records in the name of the Brazilian depository.

Transfers of shares by a foreign investor are made in the same way and executed by such investor's local agent on the investor's behalf except that, if the original investment was registered with the Central Bank under the Brazilian foreign investment in capital markets regulations, the foreign investor should also seek amendment, if necessary, though its local agent, of the certificate of registration to reflect the new ownership.

The B3 reports transactions carried out in its market to its *Central Depositária*, which is the exchange's central clearing system. A holder of our shares may choose, at its discretion, to participate in this system. All shares elected to be put into the system will be deposited in custody with the relevant stock exchange, through a Brazilian institution duly authorized to operate by the Central Bank and CVM and having a clearing account with the relevant stock exchange. The fact that such shares are subject to custody with the relevant stock exchange will be reflected in our register of shareholders. Each participating shareholder will, in turn, be registered in our register of beneficial shareholders, as the case may be, maintained by the relevant stock exchange and will be treated in the same way as registered shareholders.

C. Material Contracts

See “Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources—Sources of Funds—Financial Contracts” the summary of certain financing agreements to which we have been a party, other than contracts entered into in the ordinary course of business.

D. Exchange Controls

There are no restrictions on ownership of our common shares by individuals or legal entities domiciled outside Brazil. However, the right to convert dividend payments and proceeds from the sale of shares into foreign currency and to remit such amounts outside Brazil is subject to restrictions under foreign investment legislation, which generally requires, among other things, that the relevant investments have been registered with the Central Bank.

Foreign investors may register their investment under Law No. 4,131 of September 3, 1962, or Law No. 4,131, or Resolution CMN 4,373 (that replaced Resolution CMN 2,689). Registration under Law No. 4,131 or under Resolution CMN 4,373 generally enables foreign investors to convert into foreign currency dividends, other distributions and sales proceeds received in connection with registered investments and to remit such amounts abroad. Resolution CMN 4,373 affords favorable tax treatment to foreign investors who are not resident in a Low or Nil Tax Jurisdiction, which is defined under Brazilian tax laws as a country that does not impose taxes or where the maximum income tax rate is lower than 17% or that restricts the disclosure of shareholder composition or ownership of investments.

Under Resolution CMN 4,373, foreign investors may invest in almost all financial assets and engage in almost all transactions available in the Brazilian financial and capital markets, provided that certain requirements are fulfilled. In accordance with Resolution CMN 4,373, foreign investors are individuals, corporations, mutual funds and collective investments domiciled or headquartered abroad.

Pursuant to Resolution CMN 4,373, foreign investors must:

- appoint at least one representative in Brazil with powers to perform actions relating to the foreign investment;
- complete the appropriate foreign investment registration form;
- obtain registration as a foreign investor with the CVM; and
- register the foreign investment with the Central Bank.

The securities and other financial assets held by the foreign investor pursuant to Resolution CMN 4,373 must be:

- registered or maintained in deposit accounts or under the custody of an entity duly licensed by the Central Bank or by the CVM; or
- registered in registration, clearing and custody systems authorized by the Central Bank or by the CVM.

In addition, securities trading by foreign investors pursuant to Resolution CMN 4,373 is restricted to transactions carried out on the stock exchanges or organized over-the-counter markets licensed by the CVM.

On January 26, 2000, the Central Bank enacted Circular No. 2,963, providing that beginning on March 31, 2000, all investments by a foreign investor under Resolution CMN 4,373 are subject to the electronic registration with the Central Bank. Foreign investments registered under the Annex IV regulations were required to conform to the new

registration rules by June 30, 2000.

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Resolution No. 1,927 of the CMN provides for the issuance of depositary receipts in foreign markets in respect of shares of Brazilian issuers. Our ADS program was approved under the Annex V regulations by the Central Bank and the Securities and Exchange Commission of Brazil prior to the issuance of the ADSs. Accordingly, the proceeds from the sale of ADSs by ADR holders outside Brazil are free of Brazilian foreign investment controls and holders of the ADSs will be entitled to favorable tax treatment. According to Resolution CMN 2,689, foreign investments registered under Annex V Regulations may be converted into the new investment system and vice-versa, provided that the conditions set forth by the Central Bank and the CVM are complied with.

Under current Brazilian legislation, the Federal Government may impose temporary restrictions on remittances of foreign capital abroad in the event of a serious imbalance or an anticipated serious imbalance of Brazil's balance of payments. For approximately six months in 1989 and early 1990, the Federal Government froze all dividend and capital repatriations that were owed to foreign equity investors, in order to conserve Brazil's foreign currency reserves. These amounts were subsequently released in accordance with Federal Government directives. The imbalance in Brazil's balance of payments increased during 1999, and there can be no assurance that such increases will not incur in the future or that the Federal Government will not impose similar restrictions on foreign repatriations in the future for similar or other reasons.

E. Taxation

The following summary contains a description of the principal Brazilian and U.S. federal income tax consequences of the ownership and disposition of the common shares or ADSs, but it does not purport to be a comprehensive description of all the tax considerations that may be relevant to a decision to hold common shares or ADSs. The summary is based upon the tax laws of Brazil and regulations thereunder and on the federal income tax laws of the United States and regulations and other authorities thereunder as of the date hereof, all of which are subject to change. Holders of common shares or ADSs should consult their tax advisers as to the tax consequences of the ownership and disposition of common shares or ADSs in their particular circumstances.

Although there is at present no income tax treaty between Brazil and the United States, the tax authorities of the two countries have had discussions that may culminate in such a treaty in the future. No assurance can be given, however, as to whether or when a treaty will enter into force or how it will affect the U.S. holders of common shares or ADSs.

Brazilian Tax Considerations

The following discussion summarizes the principal Brazilian tax consequences of the ownership and disposition of common shares or ADSs by a non-Brazilian holder. This discussion does not address all the Brazilian tax considerations that may be applicable to any particular non-Brazilian holder, and each non-Brazilian holder should consult its tax adviser about the Brazilian tax consequences of investing in common shares or ADSs.

Taxation of Dividends

Dividends paid by us in cash or in kind from profits of periods beginning on or after January 1, 1996 (1) to the depositary in respect of common shares underlying ADSs or (2) to a non-Brazilian holder in respect of common shares will generally not be subject to Brazilian income tax withholding.

Taxation of Gains

According to Article 26 of Law No. 10,833 of December 29, 2003, which came into force on February 1, 2004, capital gains realized on the disposition of assets located in Brazil by non-Brazilian residents, whether or not to other non-residents and whether made outside or within Brazil, are subject to taxation in Brazil. Since January 1, 2017, the

rate of the income tax on capital gains accrued by non-Brazilian individual residents may vary between 15% and 22.5% depending on the capital gain amount. Ultimately, a 25% rate may apply if the capital gain is realized by investors located in a Low or Nil Tax Jurisdiction (see below under “—Discussion on Low or Nil Tax Jurisdictions”). Although we believe that the ADSs will not fall within the definition of assets located in Brazil for the purposes of Law No. 10,833, considering the general and unclear scope of Law 10,833 and the absence of any judicial guidance in respect thereof, we are unable to predict whether such interpretation will ultimately prevail in the Brazilian courts.

Gains realized by non-Brazilian holders on dispositions of common shares in Brazil or in transactions with Brazilian residents may be exempt from Brazilian income tax or taxed at a rate that may vary between 15% and 25%, depending on the circumstances. This is because the current legislation prescribes specific taxation rules for gains arising from investments in the Brazilian financial and capital markets as opposed to other types of gains.

In this sense, gains realized by non-Brazilian holders through transactions on Brazilian stock exchanges, if carried out in accordance with Resolution CMN 4,373 (that replaced Resolution CMN 2,689), as described below, are exempt from Brazilian income tax or subject to income tax at a rate of 15% if a holder in a Low or Nil Tax Jurisdiction realizes the gain. On the other hand, gains realized through transactions with Brazilian residents or not executed on the Brazilian stock exchanges are subject to tax at a rate that may vary between 15% and 22.5% depending on the capital gain amount, or of 25% if the transactions are made by investors resident in a Low or Nil Tax Jurisdiction. Non-Brazilian holders should consult their tax advisors on the applicable income tax rate.

Non-Brazilian holders of common shares registered under Resolution CMN 4,373 (which includes ADSs) will only be subject to the tax exemption mentioned herein if the investor has:

- appointed a representative in Brazil with power to take action relating to the investment in common shares;
- registered as a foreign investor with the CVM; and
- registered its investment in common shares with the Central Bank.

In addition, Resolution CMN 4,373 also establishes that securities held by foreign investors must be maintained under the custody of, or in deposit accounts with, financial institutions duly authorized by the Central Bank and the CVM.

Securities trading under Resolution CMN 4,373 is restricted to transactions on Brazilian stock exchanges or qualified over-the-counter markets. As stated herein, the preferential treatment afforded under Resolution CMN 4,373 and afforded to investors in ADSs is not available to investors resident or domiciled in Low or Nil Tax Jurisdictions.

There can be no assurance that the current preferential treatment for non-Brazilian holders of common shares under Resolution CMN 4,373 will be maintained.

Gain on the disposition of common shares, subject to the tax treatment described above, is measured by the difference between the amounts in Brazilian currency realized on the sale or exchange and the acquisition cost of the shares sold, measured in Brazilian currency, without any correction for inflation. The acquisition cost of shares registered as an investment with the Central Bank is calculated on the basis of the foreign currency amount registered with the Central Bank.

The deposit of common shares in exchange for the ADSs may be subject to Brazilian income tax if the amount previously registered with the Central Bank as a foreign investment in our common shares is lower than

- the average price per common share on the B3 on the day of the deposit; or
- if no common shares were sold on that day, the average price per common share on the B3 during the fifteen preceding trading sessions.

The difference between the amount previously registered and the average price of the common shares, calculated as set forth above, may be considered by the tax authorities as a capital gain subject to income tax. Unless the common shares were held in accordance with Resolution CMN 4,373, in which case the exchange would be tax-free, the capital

gain will be subject to income tax at the following rates: (1) 15%, for gains realized through transactions that were conducted on Brazilian stock exchanges; or (2) from 15% to 22.5% for gains realized through transactions in Brazil that were not conducted on the Brazilian stock exchanges, or 25% if realized by investors located at Low or Nil Tax Jurisdiction.

The cancellation of ADSs in exchange for common shares is not subject to Brazilian income tax if the non-Brazilian holder qualifies under Resolution CMN 4,373, but is subject to the IOF/Exchange tax as described below.

Discussion on Low or Nil Tax Jurisdictions

For purposes of Brazilian law, Low or Nil Tax Jurisdictions are countries and jurisdictions that do not tax income or that have a maximum income tax rate lower than 17%. Since 1998, the Brazilian Internal Revenue Service has issued acts expressly listing the countries/jurisdictions that are to be considered low tax jurisdictions for Brazilian tax purposes. Currently, the tax authorities have deemed approximately 65 countries to be low tax jurisdictions pursuant to Normative Instruction 1,037/2010, article 1. These countries include the Bahamas, the British Virgin Islands, the Cayman Islands, Hong Kong and certain corporate regimes of Singapore.

Under Brazilian tax legislation, holders domiciled in Low or Nil Tax Jurisdictions are: (1) subject to a higher rate of withholding tax on income and capital gains; (2) not entitled to exemptions for investments in the Brazilian capital markets; (3) subject to automatic application of transfer pricing rules in transactions with Brazilian legal entities that are resident in Brazil; and (4) subject to thin capitalization rules on debt with legal entities that are resident in Brazil.

On June 24, 2008, Law No. 11,727/08 established the concept of “privileged tax regime”, which is a tax regime that (1) does not tax income or taxes it at a maximum rate lower than 20%; (2) grants tax benefits to non-resident entities or individuals (a) without the requirement to carry out a substantial economic activity in the country or dependency or (b) contingent to the non-exercise of a substantial economic activity in the country or dependency; (3) does not tax or that taxes the income generated abroad at a maximum rate lower than 20%; or (4) does not provide access to information related to shareholding composition, ownership of assets and rights or economic transactions carried out. However in 2014, an executive order National Treasury Ordinance No. 488/14 was issued (endorsed by Normative Instruction No. 1,530/14) indicating that, if countries are aligned with the international standards of fiscal transparency, the maximum rate to be considered as a “privileged tax regime” would be 17% and not 20%.

In principle, the best interpretation of Law No. 11,727/08 is that the new concept of privileged tax regime should be solely applied for purposes of transfer pricing rules in export and import transactions. However, due to the recent enactment of this Law, we are unable to ascertain whether or not the privileged tax regime concept will be extended to the concept of Low or Nil Tax Jurisdiction. The provisions of Law No. 11,727/08 that refer to the privileged tax regime came into effect on January 1, 2009. Although we are of the opinion that the concept of privileged tax regime should not affect the tax treatment of a non-resident shareholder described above, we cannot assure you whether subsequent legislation or interpretations by the Brazilian tax authorities regarding the definition of privileged tax regime will extend such concept to the tax treatment of a non-resident shareholder described above.

Prospective purchasers should therefore consult with their tax advisors regarding the consequences of the implementation of Law No. 11,727/08, Normative Instruction No. 1,037/2010 and of any related Brazilian tax laws or regulations concerning Low or Nil Tax Jurisdictions and privileged tax regimes.

Distributions of Interest on Capital

A Brazilian corporation may make payments to its shareholders characterized as interest on the corporation’s capital as an alternative form of making dividend distributions. See “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Dividend Policy.” The rate of interest may not be higher than the TJLP, as determined by the Central Bank from time to time. The total amount distributed as interest on capital may not exceed, for tax purposes, the greater of:

- 50% of net income for the year in respect of which the payment is made, after the deduction of social contribution or net profits and before (1) making any deduction for corporate income taxes paid and (2) taking such distribution into account; or

- 50% of retained earnings for the year prior to the year in respect of which the payment is made.

Payments of interest on capital are decided by the shareholders on the basis of recommendations by our Board of Directors.

Distributions of interest on capital paid to Brazilian and non-Brazilian holders of common shares, including payments to the depositary in respect of common shares underlying ADSs, are deductible by us for Brazilian tax purposes up to the limit mentioned above. Such payments are subject to withholding income tax at the rate of 15%, or 25% in the case of a stockholder who is domiciled in a Low or Nil Tax Jurisdiction. These payments may be qualified, at their net value, as part of any mandatory dividend. As described herein the Company and its subsidiaries executed interest on equity payments in 2017. Please refer to “Item 4. Information of the Company—2017 Important Events—Interest on Equity” for detailed information. No assurance can be given that our Board of Directors will not recommend that future distributions of profits be made as interest on capital instead of as dividends.

Other Brazilian Taxes

There are no Brazilian inheritance, gift or succession taxes applicable to the ownership, transfer or disposition of the common shares or ADSs by a non-Brazilian holder except for gift and inheritance taxes levied by some states in Brazil on gifts made or inheritances bestowed by individuals or entities not resident or domiciled in Brazil or in the relevant state to individuals or entities that are resident or domiciled within such state in Brazil. There is no Brazilian stamp, issue, registration or similar taxes or duties payable by holders of common shares or ADSs.

In 2018, there were two changes related to IOF: (i) the tax rate on foreign exchange transactions was increased to 1.10% (it was 0.38%) pursuant to Decree No. 9,297/2018; and (ii) rules were adopted relating to incidence of IOF in credit transactions of a period longer than one year pursuant to RFB Normative Instruction No. 1,814/2018.

Tax on Foreign Exchange and Financial Transactions

Tax on foreign exchange transactions, or the “IOF/Exchange Tax”

Brazilian law imposes the IOF/Exchange Tax on the conversion of reais into foreign currency and on the conversion of foreign currency into reais. Currently, the tax rate related to foreign investments in the Brazilian financial and capital markets is zero.

However, it is important to note that the Brazilian Government is permitted to increase such rate at any time up to 25%. However, any increase in rates may only apply to future foreign exchange transactions.

Tax on transactions involving bonds and securities, or the “IOF/Bonds Tax.”

Brazilian law imposes the IOF/Bonds Tax on transactions involving bonds and securities, including those carried out on a Brazilian stock exchange. The rate of IOF/Bonds Tax applicable to transactions involving the deposit of common shares in exchange for ADSs is currently zero, but can be reviewed by the Brazilian government any time. The rate is applied to the product of the number of common shares received and the closing price for those shares on the date prior to the transfer, or if such closing price is not available, the last available closing price for such shares.

U.S. Federal Income Tax Considerations

The following are the material U.S. federal income tax consequences to a U.S. Holder described below of owning and disposing of common shares or ADSs, but it does not purport to be a comprehensive description of all tax

considerations that may be relevant to a particular person's decision to hold or dispose of such securities. The discussion applies only to a U.S. Holder that holds common shares or ADSs as capital assets for U.S. federal income tax purposes and it does not describe all tax consequences that may be relevant to U.S. Holders subject to special rules, such as:

- certain financial institutions;

- insurance companies;
- dealers or traders in securities or foreign currencies who use a mark-to-market method of tax accounting;
- persons holding common shares or ADSs as part of a hedge, “straddle,” wash sale, conversion transaction, integrated transaction or similar transaction or persons entering into a constructive sale with respect to the common shares or ADSs;
- persons whose functional currency for U.S. federal income tax purposes is not the U.S. dollar;
- partnerships or other entities classified as partnerships for U.S. federal income tax purposes;
- persons liable for the alternative minimum tax or the provisions of the Code (as defined below) known as the Medicare Contribution Tax;
- tax-exempt entities, including “individual retirement accounts” or “Roth IRAs;”
- persons who acquired our common shares or ADSs pursuant to the exercise of an employee stock option or otherwise as compensation;
- persons holding shares in connection with a trade or business conducted outside the United States; or
- persons holding common shares or ADSs that own or are deemed to own 10% or more of our stock (by vote or value).

If an entity that is classified as a partnership for U.S. federal income tax purposes holds common shares or ADSs, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. Partnerships holding common shares or ADSs and partners in such partnerships should consult their tax advisers as to the particular U.S. federal income tax consequences of holding and disposing of the common shares or ADSs.

This discussion is based on the Internal Revenue Code of 1986, as amended, or the “Code,” administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, all as of the date hereof. These laws are subject to change, possibly with retroactive effect. It is also based in part on representations by the depositary and assumes that each obligation under the deposit agreement and any related agreement will be performed in accordance with its terms.

A “U.S. Holder” is a holder who, for U.S. federal income tax purposes, is a beneficial owner of common shares or ADSs that is:

- a citizen or individual resident of the United States;
- a corporation, or other entity taxable as a corporation, created or organized in or under the laws of the United States, any state therein or the District of Columbia; or
- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

In general, a U.S. Holder that owns ADSs will be treated as the owner of the underlying common shares represented by those ADSs for U.S. federal income tax purposes. Accordingly, no gain or loss will be recognized if a U.S. Holder

exchanges ADSs for the underlying common shares represented by those ADSs.

The U.S. Treasury has expressed concerns that parties to whom American depositary shares are released before delivery of shares to the depositary, or intermediaries in the chain of ownership between U.S. Holders and the issuer of the security underlying the American depositary shares, may be taking actions that are inconsistent with the claiming of foreign tax credits by U.S. Holders of American depositary shares. Such actions would also be inconsistent with the claiming of the preferential rates of tax applicable to dividends received by certain non-corporate U.S. Holders. Accordingly, the creditability of Brazilian taxes and the availability of the preferential tax rates for dividends received by certain non-corporate U.S. Holders, each described below, could be affected by actions taken by such parties or intermediaries.

U.S. Holders should consult their tax advisers concerning the U.S. federal, state, local and foreign tax consequences of owning and disposing of common shares or ADSs in their particular circumstances.

This discussion assumes that the Company is not, and will not become, a passive foreign investment company, as described below.

Taxation of Distributions

Distributions paid on common shares or ADSs, including distributions of interest on capital, will generally be treated as dividends to the extent paid out of the Company's current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Because the Company does not maintain calculations of its earnings and profits under U.S. federal income tax principles, it is expected that distributions generally will be reported to U.S. Holders as dividends. Subject to applicable limitations and the discussion above regarding concerns expressed by the U.S. Treasury, dividends paid by qualified foreign corporations to certain non-corporate U.S. Holders are taxable at rates applicable to long-term capital gains. A foreign corporation is treated as a qualified foreign corporation with respect to dividends paid on stock that is readily tradable on a securities market in the United States, such as the New York Stock Exchange (where our ADSs are traded). U.S. Holders should consult their tax advisers to determine whether these preferential rates will apply to dividends they receive and whether they are subject to any special rules that limit their ability to be taxed at these preferential rates.

The amount of a dividend will include any amounts withheld by the Company in respect of Brazilian taxes on the distribution. The amount of the dividend will be treated as foreign-source dividend income to U.S. Holders and will not be eligible for the dividends-received deduction generally allowed to U.S. corporations under the Code. Dividends will be included in a U.S. Holder's income on the date of the U.S. Holder's or, in the case of ADSs, the depositary's receipt of the dividend. The amount of any dividend income paid in *reais* will be the U.S. dollar amount calculated by reference to the exchange rate in effect on the date of such receipt regardless of whether the payment is in fact converted into U.S. dollars. If the dividend is converted into U.S. dollars on the date of receipt, a U.S. Holder generally should not be required to recognize foreign currency gain or loss in respect of the dividend income. A U.S. Holder may have foreign currency gain or loss if the dividend is converted into U.S. dollars after the date of its receipt.

Sale or Other Disposition of Common Shares or ADSs

For U.S. federal income tax purposes, gain or loss realized on the sale or other disposition of common shares or ADSs will be capital gain or loss, and will be long-term capital gain or loss if the U.S. Holder held the common shares or ADSs for more than one year. The amount of the gain or loss will equal the difference between the U.S. Holder's tax basis in the common shares or ADSs disposed of and the amount realized on the disposition, in each case as determined in U.S. dollars. Such gain or loss will generally be U.S.-source gain or loss for foreign tax credit purposes. If a Brazilian tax is withheld on the sale or other disposition of common shares or ADSs, a U.S. Holder's amount realized will include the gross amount of the proceeds of such sale or other disposition before deduction of the Brazilian tax.

See "—Brazilian Tax Considerations—Taxation of Gains" for a description of when a disposition may be subject to taxation by Brazil.

Foreign Tax Credits in Respect of Brazilian Taxes

Subject to applicable limitations that may vary depending upon a U.S. Holder's circumstances and subject to the discussion above regarding concerns expressed by the U.S. Treasury, Brazilian income taxes withheld from dividends

on common shares or ADSs generally will be creditable against a U.S. Holder's U.S. federal income tax liability.

A U.S. Holder will be entitled to use foreign tax credits to offset only the portion of its U.S. tax liability that is attributable to foreign-source income. This limitation on foreign taxes eligible for credit is calculated separately with regard to specific classes of income. Because a U.S. Holder's gains from the sale or exchange of common shares or ADSs will generally be treated as U.S.-source income, this limitation may preclude a U.S. Holder from claiming a credit for all or a portion of the Brazilian taxes imposed on any such gains. U.S. Holders should consult their tax advisers as to whether these Brazilian taxes may be creditable against the U.S. Holder's U.S. federal income tax liability on foreign-source income from other sources. Instead of claiming a credit, a U.S. Holder may elect to deduct such Brazilian taxes in computing its taxable income, subject to generally applicable limitations under U.S. law. An election to deduct foreign taxes instead of claiming foreign tax credits must apply to all taxes paid or accrued in the taxable year to foreign countries and possessions of the United States.

The Brazilian IOF/Bonds Tax and any IOF/Exchange Tax imposed on the deposit of common shares in exchange for ADSs and the cancellation of ADSs in exchange for common shares (as discussed above under “—Brazilian Tax Considerations—Tax on Foreign Exchange and Financial Transactions”) will not be treated as creditable foreign taxes for U.S. federal income tax purposes. U.S. Holders should consult their tax advisers regarding the tax treatment of these taxes for U.S. federal income tax purposes.

The rules governing foreign tax credits are complex and, therefore, U.S. Holders should consult their tax advisers regarding the availability of foreign tax credits in their particular circumstances.

Passive Foreign Investment Company Rules

The Company believes that it was not a “passive foreign investment company,” or PFIC, for U.S. federal income tax purposes for its 2018 taxable year. However, since PFIC status depends upon the composition of a company's income and assets and the market value of its assets from time to time, there can be no assurance that the Company will not be a PFIC for any taxable year.

If the Company were a PFIC for any taxable year during which a U.S. Holder held common shares or ADSs, gain recognized by such U.S. Holder on a sale or other disposition (including certain pledges) of the common shares or ADSs would be allocated ratably over the U.S. Holder's holding period for the common shares or ADSs. The amounts allocated to the taxable year of the sale or other disposition and to any year before the Company became a PFIC would be taxed as ordinary income. The amount allocated to each other taxable year would be subject to tax at the highest rate in effect for individuals or corporations, as appropriate, for such taxable year, and an interest charge would be imposed on the resulting tax liability for such taxable year. Similar rules would apply to any distribution received by a U.S. Holder on its common shares or ADSs to the extent in excess of 125% of the average of the annual distributions on common shares or ADSs received by a U.S. Holder during the preceding three years or such U.S. Holder's holding period, whichever is shorter. Certain elections (such as a mark-to-market election) may be available that would result in alternative treatment under the PFIC rules. U.S. Holders should consult their tax advisers to determine whether the Company is a PFIC for any given taxable year and the tax consequences to them of holding shares in a PFIC.

If the Company is a PFIC for any taxable year during which a U.S. Holder owned common shares or ADSs, the U.S. Holder will generally be required to file IRS Form 8621 with its annual U.S. federal income tax returns, subject to certain exceptions.

Information Reporting and Backup Withholding

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries generally are subject to information reporting and may be subject to backup withholding unless (1) the U.S. Holder is a corporation or other exempt recipient or (2) in the case of backup withholding, the U.S.

Holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding.

The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder's U.S. federal income tax liability and may entitle the U.S. Holder to a refund, provided that the required information is timely furnished to the IRS.

Certain U.S. Holders who are individuals (and certain specified entities) may be required to report information relating to their ownership of an interest in certain foreign financial assets, including stock of a non-U.S. person, subject to exceptions (including an exception for stock held through a U.S. financial institution). U.S. Holders should consult their tax advisers regarding their reporting obligations with respect to our common shares or ADSs.

U.S. HOLDERS OF OUR COMMON SHARES OR ADSs SHOULD CONSULT THEIR OWN TAX ADVISERS AS TO THE BRAZILIAN, U.S. FEDERAL, STATE, LOCAL AND OTHER TAX CONSEQUENCES OF THE OWNERSHIP AND DISPOSITION OF OUR COMMON SHARES OR ADSs BASED UPON THEIR PARTICULAR CIRCUMSTANCES.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

Statements contained in this annual report as to the contents of any contract or other document referred to are not necessarily complete, and each of these statements is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit hereto. Anyone may read and copy this report, including the exhibits hereto, at the Securities and Exchange Commission's public reference room in Washington, D.C. Information on the operation of the public reference room is available over the Internet at <http://www.sec.gov>.

We are subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, will file periodic reports and other information with the SEC. These periodic reports and other information will be available for inspection and copying at the regional offices, public reference facilities of the SEC referred to above. As a foreign private issuer, we are exempt from certain provisions of the Exchange Act prescribing the furnishing and content of proxy statements and periodic reports and from Section 16 of the Exchange Act relating to short swing profits reporting and liability.

We will furnish to J.P. Morgan, as depositary, copies of all reports we are required to file with the SEC under the Exchange Act, including our annual reports in English, containing a brief description of our operations and our audited annual consolidated financial statements. In addition, we are required under the Deposit Agreement to furnish the depositary with copies of English translations to the extent required under the rules of the SEC of all notices of common shareholders' meetings and other reports and communications that are generally made available to holders of common shares. Under certain circumstances, the depositary will arrange for the mailing to all ADR holders, at our expense, of these notices, reports and communications.

We also file financial statements and other periodic reports with the CVM. Copies of our annual report on Form 20-F and documents referred to in this annual report and our bylaws will be available for inspection upon request at our offices at 850, João Cabral de Melo Neto, North Tower – 12th floor, 22775-057, Rio de Janeiro, RJ, Brasil.

I. Subsidiary Information

Not applicable.

Item 11. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk from changes in both foreign currency exchange and interest rates. We are exposed to foreign exchange rate risk mainly because certain costs of ours are denominated in currencies (primarily U.S. dollars) other than those in which we earn revenues (primarily *reais*). Similarly, we are subject to market risk deriving from changes in interest rates, which may affect the cost of our financing. Since 1999, we began entering into hedging agreements, derivative instruments, such as foreign exchange forward contracts, foreign currency options, interest rate swaps and forward rate agreements, to manage these market risks, covering payments of principal on our foreign exchange denominated indebtedness. We also have entered into arrangements to hedge market risk deriving from changes in interest rates for some of our debt obligations. We do not hold or issue derivative or other financial instruments for trading purposes.

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Interest Rate Risk

On December 31, 2018, the amount of our outstanding debt which accrued interest at the CDI, TJLP and SELIC floating interest rates totaled R\$1,540 million. On the same date, we had cash and cash equivalents, in the amount of R\$1,861 million in instruments accruing interest at the CDI rate.

Over a one-year period, before accounting for tax expenses, a hypothetical, instantaneous and unfavorable change of 100 basis points in interest rates applicable to our financial assets and liabilities on December 31, 2018 would have resulted in a variation of R\$1 million in our interest expenses from financial contracts and a variation of R\$1 million in our income from financial investments (assuming that this hypothetical 100 basis point movement in interest rates uniformly applied to each “homogenous category” of our financial assets and liabilities and that such movement in interest rates was sustained over the full one-year period).

Exchange Rate Risk

As of December 31, 2018, we did not have any outstanding unhedged financial loans denominated in foreign currency and were thus not exposed to exchange rate risk based on our loans. We enter into hedging agreements to hedge our borrowings denominated in foreign currency and thus have limited our exchange rate exposure regarding such borrowings.

Our revenues are earned almost entirely in *real*, and we have no material foreign currency-denominated assets. We acquire our equipment and handsets from global suppliers, the prices of which are primarily denominated in U.S. dollars. Thus, we are exposed to foreign exchange risk arising from our need to make substantial dollar-denominated expenditures, particularly for imported components, equipment and handsets, that we have limited capacity to hedge. In order to hedge part of the exchange rate risk linked to capital expenditures and operating expenses, a bandwidth of +/- 10% is generally negotiated into our agreements in order to minimize effects of exchange rate fluctuations on the acquisition costs of equipment. Given high volatility due to the presidential elections in Brazil, in the year ended December 31, 2018 the Company bought dollar call options in order to increase its hedging protection against fluctuation in exchange rates in connection with commercial contracts.

Item 12. Description of Securities Other than Equity Securities

A. Debt Securities

Not applicable.

B. Warrants and Rights

Not applicable.

C. Other Securities

Not applicable.

D. Description of American Depositary Receipts in Respect of Common Shares

Our depositary is J.P. Morgan Chase Bank, N.A., with its corporate trust office at which the ADRs will be administered is located at 4 New York Plaza, Floor 6, New York, NY, 10004, United States.

Each ADS represents five common shares, deposited with the custodian and registered in the name of the depositary.

Charges of Depositary

The depositary may charge U.S.\$5.00 or less per 100 ADSs (or portion thereof) from each person to whom ADSs are issued, including issuances against deposits of shares, issuances in respect of share distributions, rights and other distributions, issuances pursuant to a stock dividend or stock split declared by the Company or issuances pursuant to a merger, exchange of securities or any other event affecting the ADSs or the deposited securities. It may also charge each person surrendering ADRs for withdrawal or whose ADSs are cancelled or reduced for any other reason.

Furthermore, the depositary may also charge any additional fees incurred in connection with such transaction by any governmental authorities or other institutions such as the Brazilian Clearing and Depository Corporation (*Companhia Brasileira de Liquidação e Custódia*) or the B3, the stock exchange on which the shares are registered for trading.

Altogether, the following fees and charges can be incurred by ADR holders, any party depositing or withdrawing common shares or any party surrendering ADRs or to whom ADRs are issued (including, without limitation, issuance pursuant to a stock dividend or stock split declared by TIM Participações or an exchange of stock regarding the ADRs or deposited securities or a distribution of ADRs pursuant to the deposit agreement), whichever is applicable:

Depositary Actions:

Depositing or substituting the underlying shares

Receiving or distributing dividends

Selling or exercising rights

Withdrawal of an underlying security

Transferring, splitting, grouping receipts

General depositary services

Description of Fees Incurred by ADR Holders per Payment:

U.S.\$5.00 or less per 100 ADSs (or portion thereof)

U.S.\$0.05 or less per ADS (or portion thereof)

U.S.\$5.00 or less per 100 ADSs for all distributions of securities or the net cash proceeds from the sale thereof

U.S.\$5.00 or less per 100 ADSs (or portion thereof)

U.S.\$1.50 per ADR or ADSs for transfers made, to the extent not prohibited by the rules of any stock exchange or interdealer quotation system upon which the ADSs are traded, including, as necessary, any transfer or registration fees in connection with the deposit or withdrawal of deposited securities

An aggregate fee of U.S.\$0.05 or less per ADS per calendar year (or portion thereof) for services performed by the depositary in administering the ADRs.

As necessary, expenses incurred by the depositary in connection with the conversion of *reais* into U.S. dollars

As necessary, cable, telex and facsimile transmission and delivery charges incurred at the request of persons depositing or delivering common shares, ADRs or any deposited securities

As necessary, any fees and expenses incurred by the depositary in connection with the delivery of deposited securities or otherwise in connection with the depositary's or its custodian's compliance with applicable laws, rules or regulations.

Ongoing Reimbursements by the Depositary

J.P. Morgan, as depositary, has agreed to reimburse certain reasonable Company's expenses related to the establishment and maintenance of the ADR program. Such reimbursable expenses include legal fees, investor relations servicing, investor related presentations, broker reimbursements, ADR-related advertising and public relations in those jurisdictions in which the ADRs may be listed or otherwise quoted for trading, accountants' fees in relation to this Form 20-F filing with the SEC and other bona fide Program-related third party expenses.

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During the year ended December 31, 2018, we received from our depositary U.S.\$3,002,609 as reimbursement of expenses related to annual stock exchange listing fees, standard maintenance costs of ADRs, underwriting and legal fees and investor relations activities.

See also “Item 10. Additional Information—E. Taxation.”

PART II

Item 13. Defaults, Dividend Arrearages and Delinquencies

None.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

None.

Item 15. Controls and Procedures

(a) Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2018. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that these controls and procedures are effective in ensuring that all material information required to be filed in this annual report has been made known to them in a timely fashion. Our disclosure controls and procedures are effective in ensuring that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and are effective in ensuring that information to be disclosed in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

(b) Management's Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act). Our internal control system was designed to provide reasonable assurance as to the integrity and reliability of the published financial statements. All internal control systems, no matter how well designed, have inherent limitations and can provide only reasonable assurance that the objectives of the control system are met.

Management evaluated the internal control over financial reporting under the supervision of our Chief Executive Officer, or CEO, and Chief Financial Officer, or CFO, as of December 31, 2018. Management evaluated the effectiveness of our internal control over financial reporting based on the criteria set forth in the Committee of Sponsoring Organizations of the Treadway Commission framework of 2013. Our management concluded that as of December 31, 2018, our internal control over financial reporting was effective and had no material weaknesses, based on those criteria.

We are committed to continuing to improve our internal control processes and will continue to diligently review our financial reporting controls and procedures in order to ensure our compliance with the requirements of the Sarbanes-Oxley Act of 2002 and the related rules promulgated by the SEC. Our independent registered public accounting firm during the year ended December 31, 2018, PricewaterhouseCoopers Auditores Independentes, has issued an audit report on the effectiveness of our internal controls over financial reporting as of December 31, 2018.

(c) Audit Report of the Registered Public Accounting Firm

PricewaterhouseCoopers Auditores Independentes, the independent registered public accounting firm that has audited our consolidated financial statements, has issued an audit report on the effectiveness of our internal controls over financial reporting as of December 31, 2018. Their attestation report on internal controls over financial reporting is included herein.

(d) Changes in Internal Control over Financial Reporting

The Company constantly aims to improve the quality of its internal controls over financial reporting. This may result in the modification of certain internal processes and operations, without necessarily affecting related controls. There have not been any changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the period covered by this annual report that have materially affected or are reasonably likely to materially affect, our internal control over financial reporting.

Item 16. [Reserved]

Item 16A. Audit Committee Financial Expert

Our Statutory Audit Committee, which functions as an audit committee, shall be comprised of at least three and at most five members and an equal number of alternates, who may or may not be shareholders, elected by the Board of Directors. In 2018, we had three members. Our Statutory Audit Committee has determined that one of its members, Mr. Herculano Aníbal Alves, an independent member of our Statutory Audit Committee under Brazilian rules, is an “audit committee financial expert,” as such term is defined by the SEC.

Item 16B. Code of Ethics

Code of Ethics

We have adopted a Code of Ethics that applies to our Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer and persons performing similar functions, as well as to our other Directors, Statutory Officers, controlling shareholders, members of our boards and committees, all employees and suppliers in accordance with CVM rules satisfying the requirements of Brazilian Law. Our Code of Ethics is filed as an exhibit to this annual report and is available on our website at <http://ri.tim.com.br>. The Code of Ethics is also available free of charge upon request. Such request may be made by email or telephone at the address set forth in the second paragraph of “Item 4. Information on the Company—A. History and Development of the Company—Basic Information.” The Code of Ethics was updated at the Board of Directors’ meeting held on September 26, 2018.

Our Code of Ethics addresses most of the principles set forth by the SEC in Section 406 of Sarbanes-Oxley. However, pursuant to Company policy and section 156 of Brazilian Corporate Law No. 6,404, an officer is prohibited from taking part in any corporate transaction in which he has an interest that conflicts with the interests of the Company. This disqualification must be disclosed to the board. Moreover, an officer may only contract with the Company under reasonable and fair conditions, identical to those that prevail in the market or under which the company would contract with third parties. Any contract entered into or performed in violation of this article is voidable and requires the offending officer to disgorge any benefits he received from such violation.

In November 2006, a communication channel was created to address “complaints” related to breaking and/or suspicion of breaking the Control Model of the Company. The Control Model is a document based on the Code of Ethics, General Principles of Internal Control and Principles of Behavior with the Public Administration. This channel is accessible by email or letter addressed to the Internal Audit department.

Anti-Corruption Policy

In order to ensure compliance with existing Brazilian and international corruption laws and minimize the risks associated with the same, the Company has adopted an Anti-Corruption Policy (*Política Anticorrupção*). Our Anti-Corruption Policy was approved by our Board of Directors on September 26, 2018, and focuses on internal mitigating controls to be followed to avoid vulnerability to corrupt practices, including our relationship with public officials. In conjunction with the adoption of this Anti-Corruption Policy, we also provide anti-corruption training courses to our managers, directors and employees.

Anti-Corruption Organizational Model

We have adopted an Anti-Corruption Organizational Model, presented to and approved by our Statutory Audit Committee and our Risk and Control Committee in a joint meeting on July 30, 2014 and approved by our Board of

Directors on August 5, 2014. The Anti-Corruption Organizational Model, updated on October 6, 2016, is an integral part of the Company's legal and regulatory compliance program, with the purpose of generally promoting honest and ethical conduct, and deterring wrongdoings within the Company. The provisions of the Anti-Corruption Organizational Model also specifically align with Legislative Decree No. 231/01 of Italy, the Brazilian Anti-Corruption Law and international standards on anti-corruption, such as the Foreign Corrupt Practices Act and the UK Bribery Act 2010. We also provide training on the content of our Anti-Corruption Organizational Model by means of in-person courses and e-learning sessions.

Item 16C. Principal Accountant Fees and Services**Audit and Non-Audit Fees**

The following table sets forth the fees billed to us by our independent auditors during the years ended December 31, 2018 and 2017, PricewaterhouseCoopers Auditores Independentes:

	Year ended December 31,	
	2018	2017
	(in thousands of reais)	
Audit fees	5,602	6,408
Audit-related fees	249	168
Tax fees	—	—
All other fees	—	—
Total fees	5,851	6,576

Audit fees in the above table are the aggregate fees billed by PricewaterhouseCoopers Auditores Independentes, in connection with the audit of our annual financial statements and limited reviews of our quarterly financial information for statutory purposes and the assessment required under Section 404 of the Sarbanes-Oxley Act.

In 2018, our external auditors provided audit and audit-related services other than in connection with the audit of our financial statements. Such services included the review of the information Accounting Separation and Allocation Document (DSAC) and providing external audit services on our sustainability report.

Audit Committee Pre-Approval Policies and Procedures

The general authority to pre-approve the engagement of our independent auditors to render non-audit services is under the purview of our Statutory Audit Committee. Accordingly, the Statutory Audit Committee has established pre-approval procedures to control the provision of all audit and non-audit services by our independent auditors, or the Pre-Approval Policy. Under the Pre-Approval Policy, the engagement of our independent auditors to provide audit and non-audit services must be pre-approved by the Statutory Audit Committee, either in the form of a special approval or through the inclusion of the services in question in a list adopted by the Statutory Audit Committee of pre-approved services. The Pre-Approval Policy is detailed as to the particular services to be provided.

Additionally, the Pre-Approval Policy affirms that the Statutory Audit Committee's responsibilities under the Securities Exchange Act of 1934 are not delegated to management. All non-audit services provided by the Group's principal auditing firm were approved by the audit committee, and all such non-audit services to be provided in the future will also require approval from the audit committee.

Item 16D. Exemptions from the Listing Standards for Audit Committees

Not applicable. We have created a Statutory Audit Committee in accordance with Exchange Act Rule 10A-3 and CVM Instruction 509/2011.

For more details, see "Item 6. Directors, Senior Management and Employees—A. Directors and Senior Management—Statutory Audit Committee."

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

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Item 16F. Change in Registrant's Certifying Accountant

PricewaterhouseCoopers Auditores Independentes, or PwC, has been the independent registered public accounting firm for TIM Participações and its subsidiary, as appointed and approved by the Audit Committee and Board of Directors of TIM Participações, for the 2010-2018 fiscal years. As a result of the mandatory rotation of independent audit firms for public companies in Italy, as established by European and Italian legal regulations relevant to its parent company TIM S.p.A, the Company did not seek to renew PwC's contract beyond nine years when it expired and PwC did not attempt to seek such renewal. Therefore, as of the date of filing of the Company's annual report on Form 20-F, PwC is no longer the independent registered public accounting firm of the Company and the Company has not yet appointed its independent registered public accounting firm for a nine-year term beginning with the fiscal year commencing on January 1, 2019.

The reports of PwC on the consolidated financial statements of TIM Participações and its subsidiary as of and for the years ended December 31, 2018 and 2017, did not contain any adverse opinion or disclaimer of opinion, nor were they qualified or modified as to accounting principles, uncertainty or audit scope.

During the fiscal years ended December 31, 2018 and 2017 and the subsequent interim period through April 10, 2019, there were no (1) disagreements (as defined in the instructions to Item 16F of Form 20-F) with PwC on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedures, which disagreements if not resolved to the satisfaction of PwC would have caused them to make reference thereto in its report on the consolidated financial statements for such years, or (2) reportable events (as defined in Item 16F of Form 20-F).

The Company has provided PwC with a copy of the foregoing disclosure and has requested that they furnish the Company with a letter addressed to the SEC stating whether they agree with such disclosure and, if not, stating the respects in which they do not agree. A copy of PwC's letter, dated April 10, 2019, in which PwC states that they agree with such disclosure, is filed herewith as Exhibit 15.1.

Item 16G. Corporate Governance

Principal Differences Between Brazilian and US. Corporate Governance Practices

The significant differences between our corporate governance practices and those of the NYSE are as follows:

Independence of Directors and Independence Tests

Neither our Board of Directors nor our management tests the independence of directors before elections are made. However, both Brazilian corporate law and the CVM establish rules for certain qualification requirements and restrictions, investiture, compensation, and duties and responsibilities of the companies' executives and directors. We believe these rules provide adequate assurances that our directors are independent, and they permit us to have directors that would not otherwise pass the independence tests established by the NYSE.

Executive Sessions

According to Brazilian corporate law, up to one-third of the members of the Board of Directors can be elected for executive positions. The remaining non-management directors are not expressly empowered to serve as a check on management and there is no requirement that those directors meet regularly without management.

Committees

Even though we are not required under applicable Brazilian corporate law to have special advisory committees of the Board of Directors, we have three such committees: the Statutory Audit Committee, the Control and Risks Committee and the Compensation Committee. The first was implemented on December 12, 2013 and the last two were implemented on September 30, 2008. Pursuant to our Bylaws, our shareholders elect our directors at a general shareholders' meeting. Our shareholders also establish compensation for our directors and statutory officers.

Audit Committee and Additional Requirements

The Statutory Audit Committee was created and its members appointed at the shareholders' meeting held on December 12, 2013, in accordance with Rule 10A-3 under Section 301 of Sarbanes-Oxley and CVM Instruction 509/2011. The Statutory Audit Committee's internal regulations were approved at the Board of Directors meeting held on December 23, 2013.

The Statutory Audit Committee is composed of at least three (3) and at the most five (5) members, all independent, and elected by the Board of Directors, who serve two-year terms of office, matching the terms of the members of the Board of Directors. Re-election is permitted up to, for a maximum period of 10 years. Our Board of Directors may dismiss members of the Statutory Audit Committee at any time and without cause.

Shareholder Approval of Equity Compensation Plans

NYSE rules require that shareholders be given the opportunity to vote on all equity compensation plans and material revisions thereto, with limited exceptions. Under the Brazilian corporate law, shareholders must approve all stock option plans. In addition, any issuance of new shares that exceeds our authorized share capital is subject to shareholder approval.

Corporate Governance Guidelines

NYSE rules require that listed companies adopt and disclose corporate governance guidelines. Since we have migrated to the B3's *Novo Mercado*, we are subject to those rules on corporate governance, which include a disclosure policy, a policy on publicizing acts or relevant facts, which requires the public disclosure of all relevant information pursuant to guidelines set forth by the CVM, as well as an insider trading policy, a policy on securities transactions, which, among other things, establishes blackout periods and requires insiders to inform management of all transactions involving our securities.

Code of Business Conduct and Ethics

NYSE rules require that listed companies adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or statutory officers. Applicable Brazilian law does not have a similar requirement.

Item 16H. Mine Safety Disclosure

Not applicable.

PART III

Item 17. Financial Statements

We have responded to Item 18.

Item 18. Financial Statements

See our audited consolidated financial statements beginning at page F-1.

Item 19. Exhibit Index

EXHIBIT INDEX

- 1.1 Bylaws of TIM Participações S.A. approved at the Annual Shareholder's Meeting held on April 12, 2016, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 6, 2018.
- 2.1 Amended & Restated Deposit Agreement, dated as of February 27, 2017, among TIM Participações S.A., J.P. Morgan Chase Bank, N.A., as Depositary, and holders of American Depositary Receipts issued thereunder, which is incorporated by reference to Exhibit 99.(A) to our Form F-6 POS filed with the Securities and Exchange Commission on February 27, 2017.
- 4.1* English Language Summary of Deed of Indenture for the Issuance of Simple Unsubordinated Debentures, with Additional Personal Guarantee, Not Convertible into Shares, in a Single Series, for Public Placement with Limited Efforts of the First Issuance of TIM S.A., dated as of January 9, 2019, between TIM S.A., as issuer, Simplific Pavarini Distribuidora de Títulos e Valores Mobiliários Ltda., as fiduciary agent, and TIM Participações S.A., as guarantor.
- 4.2* English Language Summary of Protocol and Justification of the Merger of TIM Celular S.A. by TIM S.A., dated as of October 15, 2018, between TIM Celular S.A. and TIM S.A.
- 4.3* English Language Summary of Credit Agreement, dated as of May 2, 2018, between BNDES, the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), as lender and TIM Celular S.A. (now TIM S.A.) as borrower, and TIM Participações S.A. as guarantor.
- 4.4* English Language Summary of Credit Agreement, dated March 20, 2019, between Agência Especial de Financiamento Industrial S.A. – FINAME, an entity within the BNDES system, as lender and TIM S.A. as borrower.
- 4.5 Tenth Amendment to the Cooperation and Support Agreement, dated as of April 26, 2017, between Telecom Italia S.p.A. and TIM Celular S.A. and Intelig Telecomunicações Ltda. with the Company as intervening party, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 6, 2018.
- 4.6 English Summary of Term of Authorization for Use of Radio frequency Blocks Associated with Personal Mobile Service No. 113/2016/SOR-ANATEL, dated as of July 26, 2016, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 11, 2017.
- 4.7 English Summary of Term of Authorization for Use of Radio frequency Blocks Associated with Personal Mobile Service No. 114/2016/SOR-ANATEL, dated as of July 26, 2016, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 11, 2017.

- 4.8 Loan Agreement, dated as of December 23, 2015, between Finnish Export Credit Ltd. as lender, KfW IPEX-Bank GmbH, as facility agent and TIM Celular S.A., as borrower, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 14, 2016.
- 4.9 Facility Agreement, dated as of October 27, 2015, between Cisco Systems Capital Corporation, as Lender and TIM Celular S.A., as borrower, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 14, 2016.
- 4.10 English Summary of Credit Agreement – Contrato de Financiamento Mediante Abertura de Crédito N° 15.2.0825.1, dated as of December 29, 2015, between BNDES, the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), as lender, TIM Celular S.A., as borrower, and TIM Participações S.A. as guarantor, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 14, 2016.
- 4.11 English Summary of Term of Authorization for Use of Radio frequency Blocks Associated with Personal Mobile Service No. 144/2014/SOR-ANATEL, dated as of December 5, 2014, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2015.
- 4.12 English Summary of Term of Authorization for Use of Radio frequency Blocks Associated with Personal Mobile Service No. 145/2014/SOR-ANATEL, dated as of December 5, 2014, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2015.
- 4.13 English Summary of Term of Authorization for Use of Radio frequency Blocks Associated with Personal Mobile Service No. 146/2014/SOR-ANATEL, dated as of December 5, 2014, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2015.
- 4.14 Loan Agreement, dated as of April 15, 2014, between KfW IPEX-Bank GmbH, as lender and TIM Celular S.A., as borrower, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2015.
- 4.15 Facility Agreement Reference number TIMLAF2LT to Master Loan Agreement Reference No. TIMLALT, dated as of October 14, 2014, between Cisco Systems Capital Corporation, as lender and TIM Celular S.A., as borrower, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2015.
- 4.16 Finance Contract (Master Loan Agreement), dated as of June 20, 2013, between Cisco Systems Capital Corporation, as lender, TIM Celular S.A., as borrower, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2014.
- 4.17 Facility Agreement, dated as of August 28, 2013, between Cisco Systems Capital Corporation, as lender, and TIM Celular S.A., as borrower, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2014.
- 4.18 English Summary of Credit Agreement, dated as of December 23, 2013, between BNDES, the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), as lender and TIM Celular S.A., as borrower, and TIM Participações S.A. as guarantor, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2014.

- 4.19 English Summary of Term of Authorization for Use of Radio frequencies, dated as of April 3, 2013, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 15, 2014.
- 4.20 Fourth Amendment, dated as of December 10, 2012, to the Loan Agreement between BNDES, the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), as lender, and TIM Nordeste S.A. and TIM Celular S.A., as borrowers, dated November 19, 2008 (English translation), which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 26, 2013.
- 4.21 Fifth Amendment, dated as of December 10, 2012, to the Loan Agreement between BNDES, the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), as lender, and TIM Nordeste S.A. and TIM Celular S.A., as borrowers, dated November 19, 2008 (English translation), which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on April 26, 2013.
- 4.22 Term of Authorization for provision of PCS service dated March 12, 2001 (English translation), which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on May 14, 2012.
- 4.23 Term of Authorization for provision of PCS services dated February 26, 2010 authorization (English translation), which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on May 14, 2012.
- 4.24 Term of Authorization for provision of PCS services dated November 29, 2010 (English translation), which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on May 14, 2012.
- 4.25 Amendment No. 5 to Cooperation and Support Agreement with Telecom Italia dated April 24, 2012, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on May 14, 2012.
- 4.26 Addendum to the Loan Agreement dated as of November 19, 2008, between BNDES, the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), as lender, and TIM Nordeste S.A., as borrower, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.27 Loan Agreement, dated as of November 19, 2008, between BNDES, the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), as lender, and TIM Nordeste S.A. and TIM Celular S.A., as borrowers, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.28 Addendum to the Credit Agreement dated as of November 19, 2008, between BNDES, the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), as lender, and TIM Celular S.A., as borrower, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.29 Authorization agreement for TIM Celular S.A. dated May 25, 2007 pursuant to which TIM is authorized to provide landline switched telephone services (STFC) in regions I, II and III, which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 3, 2008.
- 4.30
- 4.31 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Nordeste S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.

- 4.32 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Nordeste S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.33 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Nordeste S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.34 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Nordeste S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.35 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Nordeste S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.36 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Nordeste S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.37 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Nordeste S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.38 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.39 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.40 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.41 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.42 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.43 Term of Authorization for Use of Radio frequencies, dated as of April 29, 2008, between Anatel (the National Telecommunications Agency) and TIM Celular S.A., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 26, 2009.
- 4.44 Term of Authorization for Use of Radio frequencies, dated as of November 30, 2005, between Anatel (the National Telecommunications Agency) and Intelig Telecomunicações Ltda., which is

	<u>incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 30, 2010.</u>
<u>4.45</u>	<u>Term of Authorization for Use of Radio frequencies, dated as of May 5, 2006, between Anatel (the National Telecommunications Agency) and Intelig Telecomunicações Ltda., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 30, 2010.</u>
<u>4.46</u>	<u>Term of Authorization for Use of Radio frequencies, dated as of April 2, 2007, between Anatel (the National Telecommunications Agency) and Intelig Telecomunicações Ltda., which is incorporated by reference to our annual report filed on Form 20-F with the Securities and Exchange Commission on June 30, 2010.</u>
6.1	Statement regarding computation of per share earnings, which is incorporated by reference to Note 34 to our consolidated financial statements included in this annual report.
<u>8.1*</u>	<u>List of Significant Subsidiaries.</u>
<u>11.1*</u>	<u>Code of Ethics (English free translation).</u>
<u>12.1*</u>	<u>Section 302 Certification of the Chief Executive Officer.</u>
<u>12.2*</u>	<u>Section 302 Certification of the Chief Financial Officer.</u>
<u>13.1*</u>	<u>Section 906 Certification of the Chief Executive Officer.</u>
<u>13.2*</u>	<u>Section 906 Certification of the Chief Financial Officer.</u>
<u>15.1*</u>	<u>Auditor Letter from PricewaterhouseCoopers Auditores Independentes to U.S. Securities and Exchange Commission Pertaining to Item 16F, dated as of April 10, 2019.</u>
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith.

Technical Glossary

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.

3G: The third generation of mobile telecommunications network technology that comply with the IMT-2000 standard as defined by the International Telecommunications Union (ITU).

3GPP (3rd Generation Partnership Project): An entity that unites seven telecommunications standard development organizations to produce reports and specifications.

4G: The fourth generation of mobile telecommunications network technology succeeding 3G, which comply with the IMT-Advanced standard as defined by the International Telecommunications Union (ITU).

Access Network: The part of a telecommunications network which connects subscribers to their immediate service provider. It is contrasted with the core network, which connects local providers to each other.

Analog: A mode of transmission or switching which is not digital, e.g., the representation of voice, video or other modulated electrical audio signals which are not in digital form.

ARPU (Monthly Average Revenue Per User): A measure used in the mobile telecommunications industry to evaluate the revenue generated by customers.

Broadband services: Services characterized by a transmission speed of 2Mbps or more. According to international standards, these services are interactive services, including video telephone/videoconferencing (both point to point and multipoint).

Core Network: The central part of a telecommunication network that connects local providers to each other and provides various services to customers who are connected by the access network.

Channel: One of a number of discrete frequency ranges utilized by a radio base station.

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 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.

Evolved Packet Core (EPC): A flat architecture used by network operators that provides a converged voice and data networking framework to connect users on a Long-Term Evolution (LTE) network.

FDD (Frequency Division Duplex): A technology used in wireless communications where the uplink and the downlink use a different frequency.

GB: A measure of the unit for digital information, representing one billion bytes.

GSM (Global System Mobile): A standard of digital mobile telecommunications technology.

HetNet: A heterogeneous network is a network connecting computers and other devices with different operating systems and/or protocols.

Interconnection charge: Amount paid per minute charged by network operators for the use of their network by other network operators. Also known as an “access charge.”

IP network: a communication network that uses Internet Protocol (IP) to send and receive messages by delivering packets from the source host to the destination host based on the IP addresses in the packet headers.

LTE (Long-Term Evolution): A wireless broadband technology designed to support roaming Internet access via cell phones and handheld devices.

MB: A measure of the unit for digital information, representing one million bytes.

MMS: An enhanced version of short message services, which provides users with the capability to send, in a single message, multiple color images, sounds and different size text to another mobile phone or email account.

Mobile Packet Core: Architecture systems for supporting mobile technologies including 2G, 3G and 4G / LTE.

Mobile service: A mobile telecommunications service provided by means of a network of interconnected low powered radio base stations, each of which covers one small geographic cell within the total mobile telecommunications system service area.

MOU (Monthly Average Minutes of Usage): The monthly average number of minutes of use of each mobile phone user.

Network: An interconnected collection 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 cable or point-to-point connections.

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

PaaS, SaaS or IaaS: Platform as a service (PaaS), software as a service (SaaS), or infrastructure as a service (IaaS).

Penetration: The measurement of the take-up of services. At any date, the penetration is calculated by dividing the number of customers by the population to which the service is available and multiplying the quotient by 100.

RAN: A radio access network, or the wireless radio frequency-based portion of a network providing access from a mobile terminal device (transmitter/receiver) to the core, or backbone, network of the radio service provider and ultimately to the public switched telephone network or the Internet or other IP-based network.

Roaming: A function that enables customers to use their mobile telephone on networks of service providers other than the one with which they signed their initial contract.

RF: Radio frequency, or a rate of oscillation which corresponds to the frequency of radio waves, and the alternating currents which carry radio signals.

SMS: Two-way short (or text) message services, allowing users to send and receive short messages to and from users of networks of other carriers.

UMTS (Universal Mobile Telecommunications System): A third-generation mobile communication standard in which data travels at 2 Mbps over a broadband system.

Value-Added Services: Value-added services provide additional functionality to the basic transmission services offered by a telecommunications network.

WAP (Wireless Application Protocol): A specification for a set of telecommunications protocols to standardize the way that wireless devices, such as mobile telephones and radio receivers, can be used to access the Internet.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Dated: April 10, 2019

TIM PARTICIPAÇÕES S.A.

By: /s/

Name: Pietro Labriola
Title: Chief Executive Officer

By: /s/

Name: Adrian Calaza
Title: Chief Financial Officer and Investor Relations Officer

TIM Participações S.A. and

Subsidiary

Consolidated Financial Statements as at

December 31, 2018 and 2017 and for each of the three years in the period ended December 31, 2018 and

Report of Independent Registered Public Accounting Firm

TIM PARTICIPAÇÕES S.A.

CONSOLIDATED FINANCIAL STATEMENTS

**As at December 31, 2018 and 2017 and for each of the
three years in the period ended December 31, 2018**

Contents

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of

TIM Participações S.A.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of TIM Participações S.A. and its subsidiary as of December 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based

on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing in Item 15(b). Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

*PricewaterhouseCoopers, Rua do Russel, n° 804 – Térreo, 6° e 7° andares – Edifício Manchete, Rio de Janeiro – RJ,
T: (21) 3232 – 6112, F: (21) 3232 – 6113, www.pwc.com/br*

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers Auditores Independentes

Rio de Janeiro, RJ, Brazil

April 10, 2019

We have served as the Company's auditor since 2010.

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY**CONSOLIDATED BALANCE SHEETS**

December 31, 2018 and December 31, 2017

(In thousands of Reais)

		Notes2018	2017
Assets		31,957,889	32,600,365
Current assets		5,998,126	7,607,388
Cash and cash equivalents	4	1,075,530	2,960,718
Marketable securities	5	784,841	765,614
Trade accounts receivable	6	2,838,808	2,540,856
Inventory	7	183,059	123,785
Indirect taxes, charges and contributions recoverable	8	280,254	386,001
Direct taxes, charges and contributions recoverable	9	347,505	323,040
Prepaid expenses	11	272,060	168,366
Financial instruments	36	50,769	53,875
Financial leases	15	22,491	19,773
Regulatory credits recoverable	16	41,612	68,571
Other current assets		101,197	196,789
Non-current assets		25,959,763	24,992,977
Long-term receivables		4,074,137	2,841,962
Marketable securities		5,229	2,997
Trade accounts receivable		130,308	26,207
Indirect taxes, charges and contributions recoverable	8	912,511	949,586
Direct taxes, charges and contributions recoverable	9	558,016	209,503
Deferred taxes	10	801,971	-
Judicial deposits	12	1,345,113	1,366,576
Prepaid expenses	11	74,381	39,466
Financial instruments	36	30,639	26,915
Financial leases	15	185,558	185,558
Other non-current assets		30,411	35,154

Property, plant and equipment	13	11,203,622	10,838,488
Intangible assets	14	10,682,004	11,312,527

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

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TIM PARTICIPAÇÕES AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS
December 31, 2018 and December 31, 2017
(In thousands of Reais)

continued

	Note	2018	2017
Liabilities and shareholders' equity		31,957,889	32,600,365
Liabilities		12,163,052	14,449,181
Current liabilities		7,075,379	7,224,437
Suppliers	17	4,323,374	3,986,557
Borrowing and financing	19	698,728	1,351,860
Financial leases	15	205,048	176,925
Financial instruments	36	2,373	14,044
Payroll and related charges		211,685	262,450
Indirect taxes, charges and contributions payable	20	451,169	305,266
Direct taxes, charges and contributions payable	21	332,333	260,786
Dividends and interest on shareholders' equity payable	24	370,105	143,591
Authorizations payable	18	65,464	233,173
Deferred revenues	22	406,867	480,431
Other current liabilities		8,233	9,354
Non-current liabilities		5,087,673	7,224,744
Borrowing and financing	19	964,289	3,339,084
Financial instruments	36	9,245	18,419
Financial leases	15	1,735,026	1,710,247
Indirect taxes, charges and contributions payable	20	2,772	2,527
Direct taxes, charges and contributions payable	21	209,880	206,788
Deferred taxes	10		98,919
Provision for legal and administrative proceedings	23	849,408	528,320
Pension plan and other post-employment benefits		2,850	2,635
Authorizations payable	18	348,336	273,527
Deferred revenues	22	906,600	990,932
Other non-current liabilities		59,267	53,346
Shareholders' equity	24	19,794,837	18,151,184
Share capital		9,866,298	9,866,298

Capital reserve	412,091	416,161
Profit reserve	9,524,124	7,884,223
Accumulated other comprehensive income	847	989
Treasury shares	(8,523)	(16,487)

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

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY**CONSOLIDATED STATEMENTS OF INCOME**

Years ended December 31

(In thousands of Reais, except as otherwise stated)

	Notes	2018	2017	2016
Revenue	26	16,981,329	16,233,959	15,617,413
Costs of services provided and goods sold	27	(7,701,418)	(8,002,077)	(7,966,487)
Gross income		9,279,911	8,231,882	7,650,926
Operating income (expenses)				
Selling expenses	27	(4,970,780)	(4,575,177)	(4,719,029)
General and administrative expenses	27	(1,608,319)	(1,424,643)	(1,258,722)
Other income (expenses), net	28	(283,289)	(298,710)	(248,979)
		(6,862,388)	(6,298,530)	(6,226,730)
Operating income		2,417,523	1,933,352	1,424,196
Financial income (expenses)				
Financial income	29	412,733	512,565	750,450
Financial expenses	30	(951,439)	(1,009,653)	(1,156,485)
Foreign exchange variations, net	31	1,373	(748)	(4,845)
		(537,333)	(497,836)	(410,880)
Income before income and social contribution taxes		1,880,190	1,435,516	1,013,316
Income and social contribution taxes	33	664,911	(201,009)	(262,889)
Net income for the year		2,545,101	1,234,507	750,427

*Earnings per share
attributed to the
Company's shareholders (in
R\$ per share)*

Basic earnings per share	34	1.05	0.51	0.31
Diluted earnings per share	34	1.05	0.51	0.31

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

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TIM PARTICIPAÇÕES AND SUBSIDIARY**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**

Years ended December 31

(In thousands of Reais)

	2018	2017	2016
Net income for the year	2,545,101	1,234,507	750,427
Other components of comprehensive income			
Item not to be reclassified to income:			
Remeasurement of post-employment benefit obligations, net of taxes	(142)	(694)	(204)
Item to be subsequently reclassified to income:			
Cash flow hedge (Note 5)		2,190	(2,190)
Total comprehensive income for the year	2,544,959	1,236,003	748,033

Items in the statement of comprehensive income are stated net of taxes.

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

TIM PARTICIPAÇÕES AND SUBSIDIARY**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY****(In thousands of Reais)**

	Profit reserves						Treasury shares	Accumulated other comprehensive income
	Share capital	Capital reserve	Legal reserve	Reserve for expansion	Tax benefit reserve			
Balances as at December 31, 2015	9,866,298	401,437	619,513	4,650,896	1,0140,660	(3,369)		1,8
Total comprehensive income for the year								
Net income for the year								
Remeasurement of post-employment benefit obligation	-	-	-	-	-	-	-	(20
Cash flow hedge								(2,19
Total comprehensive income for the year	-	-	-	-	-	-	-	(2,39
Total contributions from shareholders and distributions to shareholders								
Stock options (Note 25)	-	3,802	-	-	-	-	-	
Allocation of net income for the year:								
Legal reserve (Note 24)	-	-	37,521	-	-	-	-	
	-	-	-	-	-	-	-	

Dividends declared (Note 24)							
Reserve for tax benefit (Note 24)	-	-	-	-	118,250	-	
Reserve for expansion (Note 24)	-	-	-	445,992	-	-	
Dividends recorded directly in shareholders' equity	-	-	-	7,020	-	-	
• Total contributions from shareholders and distributions to shareholders	-	3,802	37,521	453,012	118,250	-	
Balances as at December 31, 2016	9,866,298	405,239	657,034	5,103,908	1,158,910	(3,369)	(50,000,000)

TIM PARTICIPAÇÕES AND SUBSIDIARY**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY****(In thousands of
Reais)**

	Share capital	Capital reserve	Legal reserve	Profit reserves		Treasury shares	Accumulated other comprehensive income
				Reserve for expansion	Tax benefit reserve		
Balances as at December 31, 2016	9,866,298	405,239	657,034	5,103,908	1,158,910	(3,369)	(50,000)
Total comprehensive income for the year							
Net income for the year							
Remeasurement of post-employment benefit obligation	-	-	-	-	-	-	(69,000)
Cash flow hedge	-	-	-	-	-	-	2,100
Total comprehensive income for the year		-					1,400
Total contributions from shareholders and distributions to shareholders							
Stock options (Note 24.b)	-	10,923	-	-	-		
Purchases of treasury shares, net of disposals						(13,118)	
Allocation of net income for the year:							

Legal reserve (Note 24)	-	-	61,725	-	-	-
Dividends declared (Note 24)	-	-	-	-	-	-
Interest on shareholders' equity (Note 24)	-	-	-	-	-	-
Reserve for tax benefit (Note 24)	-	-	-	-	112,493	-
Reserve for expansion (Note 24)	-	-	-	766,973	-	-
Dividends recorded directly in shareholder's equity	-	-	-	23,179	-	-
Total contributions from shareholders and distributions to shareholders		10,923	61,725	790,152	112,493	(13,118)
Balances as at December 31, 2017	9,866,298	416,162	718,759	5,894,060	1,271,403	(16,487)

TIM PARTICIPAÇÕES AND SUBSIDIARY**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY****(In thousands of
Reais)**

	Share capital	Capital reserve	Legal reserve	Profit reserves Reserve for expansion	Tax benefit reserve	Treasury shares	Accumulated other comprehensive income
Balances as at January 1st, 2018	9,866,298	416,162	718,759	5,894,060	1,271,403	(16,487)	98
Impact of initial adoption of new accounting pronouncements (Note 2.f)	-	-	-	(62,119)	-	-	
Balances as at January 1st, 2018, adjusted	9,866,298	416,162	718,759	5,831,941	1,271,403	(16,487)	98
Total comprehensive income for the year							
Net income for the year							
Remeasurement of post-employment benefit obligation	-	-	-	-		-	(142)
Total comprehensive income for the year							(142)
Total contributions from shareholders and distributions to shareholders							
Stock options (Note 24.b)	-	(4,071)	-	-			
Purchases of treasury shares, net of disposals	-	-	-	-		7,964	
Allocation of net income for the year:							
Legal reserve (Note 24)	-	-	119,933	-		-	

Interest on shareholders' equity (Note 24)	-	-	-	-	-	-
Reserve for tax benefit reserve (Note 24)	-	-			146,455	-
Reserve for expansion (Note 24)	-	-	-	1,428,719		-
Dividends recorded directly in shareholder's equity	-	-	-	6,914		-

(Note 24)

Total contributions from shareholders and distributions to shareholders	(4,071)	119,933	1,435,633	146,455	7,964	
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**Balances as at
December 31,
2018**

9,866,298 412,091 838,692 7,267,574 1,417,858 (8,523)

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

TIM PARTICIPAÇÕES AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF
CASH FLOWS
Years ended December 31
(In thousands of Reais)

	Note	2018	2017	2016
Operations				
Income before income and social contribution taxes		1,880,190	1,435,516	1,013,316
Adjustments to reconcile income with net cash from operations				
Depreciation and amortization		3,954,321	4,013,671	3,785,172
(Gain) loss on the sale of property, plant and equipment (leaseback)	28		1,801	(44,036)
Residual value of property, plant and equipment and intangible assets written off		9,700	54,104	19,528
Interest on provision for decommissioning costs		648	428	1,146
Provision for legal and administrative proceedings	23	551,191	372,469	375,242
Monetary adjustments to deposits, administrative and legal proceedings		297,529	97,805	41,010
Interest, monetary and exchange variations of borrowings and other financial adjustments		(35,450)	521,570	625,865
Lease interest payable	30	266,328	257,305	246,280
Lease interest receivable	29	(25,664)	(22,709)	(25,756)
Provision for doubtful accounts	27	544,881	316,387	266,442
Stock options	25	(1,424)	10,923	3,802
		7,442,250	7,059,270	6,308,011
Decrease (increase) in operating assets				
Trade accounts receivable		(1,028,791)	99,674	(291,825)
Taxes, charges and contributions recoverable		175,116	162,705	206,143
Inventory		(59,274)	20,149	(2,214)
Prepaid expenses		56,792	(40,490)	80,524
Judicial deposits		30,478	(53,217)	(128,256)
Other assets		133,831	(26,129)	26,064
Increase (decrease) in operating liabilities				
Payroll and related charges		(50,765)	50,171	12,906

Suppliers		331,736	523,419	(296,014)
Taxes, charges and contributions payable		(26,786)	(474,557)	(214,353)
Authorizations payable		(104,582)	(895,964)	199,163
Payments for legal and administrative proceedings	23	(536,646)	(439,670)	(413,209)
Deferred revenues		(193,599)	(415,651)	(337,806)
Other liabilities		(40,373)	(165,598)	(156,886)
Net cash from operations		6,129,387	5,404,112	4,992,248
Cash from investment activities				
Marketable securities		(21,460)	(288,658)	119,461
Cash received from property, plant and equipment sales			13,850	133,708
Additions to property, plant and equipment and intangible assets		(3,831,906)	(4,147,907)	(4,502,397)
Receipt of financial leases		22,946	22,140	20,929
Net cash used in from investment activities		(3,830,420)	(4,400,575)	(4,228,299)
Cash from financing activities				
New borrowing		166,548	646,853	1,304,492
Repayment of borrowing		(3,552,407)	(3,270,570)	(2,685,938)
Payment of financial lease		(252,410)	(219,189)	(199,747)
Financial instruments		37,044	17,677	305,336
Purchases of treasury shares, net of disposals		5,317	(13,118)	-
Dividends and interest on shareholders' equity paid		(588,247)	(332,658)	(460,309)
Net cash used in financing activities		(4,184,155)	(3,171,005)	(1,736,166)
Increase (decrease) in cash and cash equivalents		(1,885,188)	(2,167,468)	(972,217)
Cash and cash equivalents at the beginning of the year		2,960,718	5,128,186	6,100,403
Cash and cash equivalents at the end of the year		1,075,530	2,960,718	5,128,186

TIM PARTICIPAÇÕES AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF CASH FLOWS -- continued

Years ended December 31

(In thousands of Reais)

Supplementary information on consolidated statements of cash flows:

Interest paid	435,845	584,853	573,538
Income tax and social contribution paid	213,956	297,079	364,563

Non-cash transactions

Additions to property, plant and equipment and intangible assets, without cash effects	(38,944)	(48,957)	(137,199)
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Increase in lease liabilities, without cash effects	38,944	48,957	137,199
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The accompanying notes are an integral part of the consolidated financial statements.

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

1. Operations

1.a Corporate Structure

TIM Participações S.A. ("TIM Participações" and/or the "Company") is a publicly-held corporation based in the city of Rio de Janeiro, State of Rio de Janeiro, and a subsidiary of TIM Brasil Serviços e Participações S.A. ("TIM Brasil"). TIM Brasil is a subsidiary of the Telecom Italia Group and held 66.58% of the capital of TIM Participações as at December 31, 2018, (66.58% as at December 31, 2017). The main purpose of the Company and its subsidiary (the "Group") is to control companies providing telecommunications services, including personal mobile telecom services and others, in their licensed areas. The services provided by TIM Participações' subsidiary are regulated by the Agência Nacional de Telecomunicações ("ANATEL").

The Company's shares are traded on B3 (formerly BM&F/Bovespa). Additionally, TIM Participações trades its Level II American Depositary Receipts ("ADRs") on the New York Stock Exchange ("NYSE") – USA. Accordingly, the Company is subject to the rules of the Brazilian Securities Commission (Comissão de Valores Mobiliários or "CVM") and the U.S. Securities and Exchange Commission ("SEC"). In accordance with market best practice, TIM Participações adopts the practice of simultaneously releasing its financial information in *Reais* in both markets, in Portuguese and English.

Corporate Reorganization

On July 25, 2017, the meeting of the Board of Directors of the Company approved the corporate restructuring of the subsidiaries TIM Celular S.A. and Intelig Telecomunicações Ltda. ("Intelig") through the takeover of TIM Celular by Intelig. On September 6, 2017, the

corporate act transforming Intelig into a closely-held joint stock company was annotated, and its corporate name was changed to TIM S.A.. On September 30, 2018, the Company's Management had obtained from third parties all approvals and consents required to perform the said restructuring. As a result, the Company's Management proceeded with the merger on October 31, 2018, based on the net book assets of TIM Celular, in the amount of R\$17,035,254, in accordance with the report issued by independent experts as at September 30, 2018. Also as a result of this corporate restructuring, the amount of R\$952,368 relating to deferred income tax assets arising from tax losses and the negative base of TIM S.A. were recognized on September 30, 2018 (Note 10).

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

The changes in TIM Celular's equity between the date of the report (September 30, 2018) and the merger (October 31, 2019) were transferred, absorbed and incorporated into the operating income of TIM S.A., as set forth in the protocol of the merger. As a result of the merger, all TIM Celular operations were transferred to TIM S.A., which succeeded it in all its assets, rights and liabilities, universally and for all purposes of the law.

Direct subsidiary – TIM S.A.

TIM S.A. (previously INTELIG TELECOMUNICAÇÕES LTDA. and successor by merger of TIM CELULAR S.A.)

The Company holds 100% of TIM S.A.'s capital. This subsidiary provides Landline Telephone Services ("STFC") - Domestic Long-Distance and International Long-Distance Voice Services, Personal Mobile Service ("SMP") and Multimedia Communication Services ("SCM") in all Brazilian states and in the Federal District.

2. Basis for preparation and disclosure of the consolidated financial statements

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB"), and disclose all (and only) the applicable significant information related to the consolidated financial statements, which is consistent with the information utilized by management in the performance of its duties.

The significant accounting policies applied to the preparation of these consolidated financial statements are described below and/or presented in the respective notes. These policies were consistently applied to the years presented, unless otherwise indicated.

a. General preparation and disclosure criteria

The consolidated financial statements were prepared taking into account the historical cost as the base value as well as financial assets and liabilities (including derivative financial instruments) measured at fair value.

Assets and liabilities are reported according to their degree of liquidity and collectability. They are reported as current when they are likely to be realized or settled over the next 12 months. Otherwise, they are recorded as non-current. The only exception to this procedure involves deferred income tax and social contribution balances, both assets and liabilities that are fully classified as long-term.

b. Functional currency and presentation currency

The presentation currency for the consolidated financial statements is the *Real* (R\$), which is also the functional currency for all the companies consolidated in these financial statements.

Transactions in foreign currency are recognized at the exchange rate on the date of the transaction. Monetary items in foreign currency are converted into *Reais* at the exchange rate on the date of the balance sheet as published by the Central Bank of Brazil. Exchange gains and losses linked to these items are recorded in the statement of income.

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

c. Segment information

Operating segments are the components of the entity that develop business activities from which revenue can be obtained and in relation to which expenses are incurred. Their operating results are regularly reviewed by the entity's chief operating decision maker to make decisions on the allocation of resources and to assess the performance of each segment. For a segment to exist, it must have separate financial information available.

The Company's chief operating decision maker, responsible for allocating resources and for periodic performance evaluation, is the Executive Board. The Executive Board and the Board of Directors are jointly responsible for making strategic decisions and for managing the Group.

The Group's strategy is to optimize the consolidated results of TIM Participações. This strategy includes optimizing the operations of each Group company, in addition to taking advantage of the synergies generated between them. Notwithstanding the various business activities, the decision makers see the Group as a single business segment and do not take into account specific strategies intended for a particular line of service. All decisions on strategic, financial, purchasing, investment and fund investment planning are made on a consolidated basis. The aim is to maximize the consolidated result obtained by exploring the SMP, STFC and SCM licenses.

d. Consolidation procedures

Subsidiaries are all entities over which the Group holds control. The Group controls an entity when it is liable or has rights to variable returns on the basis of its involvement with the subsidiaries and has the ability to affect those returns through its power over the investee. Subsidiaries are fully consolidated from the date on which control is transferred to the Group.

The consolidation is discontinued from the date that the Group loses control over that entity.

The purchase accounting method is used to record the acquisition of subsidiaries by the Group. The acquisition cost is measured as the fair value of the assets offered, equity instruments (e.g. shares) issued and liabilities incurred or assumed by the acquirer at the date when control is exchanged. Identifiable assets acquired, contingencies and liabilities assumed in a business combination are initially measured at their fair value as at the acquisition date, irrespective of the proportion of any minority interest. The excess of the acquisition cost over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill. If the cost of acquisition is less than the fair value of net assets of the subsidiary acquired, the difference is recognized directly in the statement of income other income, after a review of the concepts and calculations applied.

Transactions between Group companies, as well as balances, unrealized gains and losses related to these transactions, are eliminated. The accounting policies of the subsidiary have been adjusted to ensure consistency with the accounting policies adopted by TIM Participações. The dates of the consolidated financial statements used in the consolidation are the same for all Group companies.

e. Approval of the consolidated financial statements

These consolidated financial statements were approved by the Company's Board of Directors on April 10, 2019.

f. New standards, amendments and interpretations of standards

l) Among the new standards that became effective as of January 1, 2018 issued by the IASB, the following standards had a material impact on the Company's consolidated financial statements:

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

IFRS 9 – “Financial instruments”

In July 2014, the International Accounting Standards Board (“IASB”) issued the final version of IFRS 9. The Company opted for the retrospective adoption of this standard, with the cumulative effect of the initial application being recognized on the date of this initial application, that is, January 1, 2018, with the cumulative effect on the date of the initial application of the standard being recognized as an adjustment to the initial balance of the profit reserve in shareholders’ equity.

This standard is applicable to financial assets and liabilities, and covers issues relating to the classification, measurement, impairment and derecognition of financial assets and liabilities, as well as hedge qualification and accounting criteria.

This standard requires that entities classify their financial assets as measured at amortized cost, at fair value through other comprehensive income, or at fair value through profit or loss, based on the assessment of the following assumptions:

- (i) The business model of the entity regarding the management of financial assets; and
- (ii) The characteristics of the contractual cash flow of the financial asset.

Regarding the classification of financial liabilities, this standard broadly maintains the requirements set forth in IAS 39, according to which entities must classify most financial liabilities as measured subsequently at amortized cost, except for derivative financial instruments, financial guarantee agreements and commitments to grant loans at interest

rates that are lower than those used in the market, among others. There was no material impact on the classification of financial assets and liabilities of the Company due to the adoption of the new standard, as presented below

	Classification in accordance with IAS 39	Classificac
Assets		
Derivative financial instruments	Assets valued at fair value	Fair value
Trade accounts receivable and other accounts receivable, excluding prepayments	borrowings and receivables	Meas
Marketable securities	Assets valued at fair value	Fair value
Cash and cash equivalents	borrowings and receivables	Meas
Leasing	borrowings and receivables	Meas
Judicial deposits	borrowings and receivables	Meas
Other assets to offset	borrowings and receivables	Meas
Liabilities		
Borrowing and financing	Other financial liabilities	Meas
Derivative financial instruments	borrowings and receivables	Fair value
Suppliers and other obligations, excluding legal obligations	Other financial liabilities	Meas
Cash and cash equivalents	Other financial liabilities	Meas
Leasing	Other financial liabilities	Meas
Dividends payable	Other financial liabilities	Meas

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

Complete information based on the nature of each financial asset and liability, as provided for in this new standard, is disclosed in Note 36.

Regarding impairment, the new standard establishes the recognition of the provision for expected credit losses, according to which the entities must recognize a provision for expected losses in financial assets measured at amortized cost. The impact of the adoption of the new model for calculating the impairment of financial assets resulted in an increase of approximately R\$130 million in the provision for doubtful accounts as at January 1st, 2018, recorded to the "profit reserve", as presented in the table below.

IFRS 15 – “Revenue from contracts with customers”

In May 2014, the IASB issued IFRS 15, which replaced IAS 18. This standard is applicable to years beginning on or after January 1st, 2018. The Company adopted IFRS 15 retrospectively, with the cumulative effects of the initial application being recognized on the date of the initial application, on January 1st, 2018. Accordingly, as provided for in this standard, the Company recorded the cumulative effect as at the date of the initial application of the standard as an adjustment to the initial balance in the profit reserve. In accordance with this transition method, the entity applied this pronouncement retrospectively only for contracts that are still in force as at the date of the initial application.

Currently, the Company offers commercial packages that basically bundle equipment or mobile devices with fixed or mobile telephony services, while the revenue from services is recognized separately, in accordance with their nature and based on their relevant fair values.

Identification of contracts

The Company performed a comprehensive review of the commercial offers in force, in order to identify the principal contractual clauses and other contractual elements that may be significant regarding the adoption of the new accounting standard.

Identification of performance obligations

Upon the adoption and initial application of the contract, the Company assessed the goods or services that were contractually promised to the customer and identified the performance obligations based on the commitments made to customers regarding the transfer of the following items:

- (i) Distinct goods or services (or group of goods or services), or
- (ii) Distinct goods or services that are substantially the same, and that can be transferred to customers using the same transfer patterns.

Goods or services promised to customers are deemed to be “distinct” when the following criteria are fulfilled:

- (a) Customers are able to benefit from the item or service, whether separately, or jointly with other resources that are readily available to them (that is, the good or service is able to be “distinct”); and
- (b) The Company’s promise to transfer the item or service to customers can be separated from other commitments undertaken within the contract (that is, the commitment to transfer the item or service is “distinct” within the context of the contract).

Upon reviewing its contracts, the Company verified the existence of two main performance obligations: (i) sale and/or rental of equipment or mobile devices; and (ii) provision of fixed and/or mobile telephony and broadband (internet) services. Accordingly, the Company will recognize revenue when, or to the extent that, it satisfies the performance obligations by transferring the goods or services that were promised to the customer. An asset will be deemed as “transferred” when, or to the extent that, the customer obtains control of the asset, which is at the moment of the delivery.

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TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

Determination and allocation of price to performance obligation

The standalone selling price was defined by the Company based on the individual selling prices used by the Company or the market; or the contract price, which would be similar to that provided for in contracts with similar characteristics.

Thus, the adoption of the new revenue standard in some cases resulted in the early recognition of revenue from the sale of equipment and/or mobile devices, which are usually recognized upon the transfer of control to the customer, basically due to the allocation of discounts between the performance obligations arising from the sale of plans that include services as well as equipment/devices. The difference between the carrying value of sales of equipment and/or mobile devices, and the amount received from the customer is recorded as a contractual asset and/or liability at the beginning of the contract. Revenue from telecom services, in turn, will be recognized in the statement of income based on the allocation of the transaction price, and to the extent that services are being provided to customers in monthly basis.

Revenue from sales of devices to business partners (retailers) is accounted for upon physical delivery to the partner, net of taxes, rather than upon sale to end customers, as the Company does not hold any control over the products sold.

Costs of obtaining the contract

In accordance with the standard, the entity must recognize in assets the incremental costs of obtaining the contract if the entity expects to recover such costs. Upon adoption of the new

standard, the Company recognized, under “prepaid expenses”, these amounts in assets and, subsequently, in income, in accordance with the transfer, to the customer, of the goods or services to which the asset refers. It should be highlighted that the Company already capitalized costs of obtaining new agreements, in the corporate contracts only, which were measured and recorded net of any impairment adjustments, as required in IAS 38, and that, following the adoption of IFRS 15, the Company’s Management decided to reclassify the accumulated balances from the “intangible assets” account to the “prepaid expenses” account.

As a result of the above, the Company recognized, on January 1st, 2018, an increase of R\$36 million, before taxes, in the item “profit reserve.”

The table below presents the principal effects of the adoption of IFRS15, also including the effects of the adoption of IFRS9 in the opening balances as at January 1st, 2018.

	Originally Reported	Adjustments	Balances under IFRS 15 and 9
	Jan 1st, 2018		Jan 1st, 2018
Assets	32,600,365	(58,100)	32,542,265
Current assets	7,607,388	38,474	7,645,862
Trade accounts receivable (e)	2,540,856	(130,137)	2,410,719
Contractual assets (b)	-	5,397	5,397
Inventories	123,785		123,785
Prepaid expenses (a, c)	168,366	163,214	331,580
Other assets	4,774,381		4,774,381
Non-current assets	24,992,977	(96,574)	24,896,403
Long-term receivables	2,841,962	32,186	2,874,148
Trade accounts receivable	26,207		26,207
Prepaid expenses (a, c)	39,466	32,186	71,652
Other assets	2,776,289		2,776,289
Property, plant and equipment	10,838,488		10,838,488
Intangible assets (c)	11,312,527	(128,760)	11,183,767
Liabilities and shareholders’ equity	32,600,365	(58,100)	32,542,265
Total liabilities	14,449,181	4,020	14,453,201
Current liabilities	7,224,437	30,295	7,254,732
Contractual liability and deferred revenue (d)	480,431	30,295	510,726
Other liabilities	6,744,006		6,744,006
Non-current liabilities	7,224,744	(26,275)	7,198,469
Contractual liability and deferred revenue (d)	990,932	5,408	996,340

Deferred income and social contribution taxes (f)	98,919	(31,683)	67,236
Other liabilities	6,134,893		6,134,893
Shareholders' equity	18,151,184	(62,119)	18,089,065
Capital shares	9,866,298		9,866,298
Revenue reserves	6,612,819	(62,119)	6,550,700
Other	1,672,067		1,672,067

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TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

In the fiscal year 2018, the new accounting standards had the following impact on the statement of income:

	Balances without IFRS 15 and IFRS 9	Adjustments	Balances with IFRS 15 and IFRS 9
Net revenue (b, d)	17,050,176	(68,847)	16,981,329
Cost of services provided and goods sold	(4,581,463)		(4,581,463)
	12,468,713	(68,847)	12,399,866
Operating revenue (expenses)			
Selling expenses (a, e)	(4,685,128)	(122,849)	(4,807,977)
General and administrative expenses	(936,756)		(936,756)
Other income (expenses), net	(283,289)		(283,289)
	(5,905,173)	(122,849)	(6,028,022)
	6,563,540	(191,696)	6,371,844
Depreciation and amortization (c)	(4,124,567)	170,246	(3,954,321)
Financial income (expenses)	(537,333)		(537,333)
Income before income and social contribution taxes	1,901,640	(21,450)	1,880,190
Income and social contribution taxes (f)	657,617	7,294	664,911
Net income for the year	2,559,257	(14,156)	2,545,101

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

The principal adjustments arising from the new standards are as follows:

- a- Costs of obtaining contracts with customers, which are deferred over the benefit period (retention period of 12 to 24 months), net of any impairment adjustments.
- b- Contractual assets recognized when the Company has fulfilled the performance obligations through the sale of equipment/devices or the provision of services to the client before the client pays the consideration, or before the payment is due.
- c- Reclassification to the “prepaid expenses” account of costs of obtaining contracts that were formerly capitalized as intangible assets.
- d- Contractual liabilities recognized when the client has paid the consideration, or when the Company has the right to a consideration amount that is unconditional, before the Company has fulfilled the performance obligation, due to the provision of services to the client.
- e- Increase in the provision for losses from doubtful accounts arising from the use of the new standard IFRS 9, in which the Company should recognize a provision for expected credit losses.
- f- Tax impact on first-time adjustments under the new accounting standards.

Contracts with customers

At December 31, 2018, the balance of contractual assets and liabilities is as follows:

	2018
Contractual assets	130
	322

Contractual liabilities	(20,928)
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Contracts with customers give rise to the allocation of discounts under combined loyalty offers, where discounts may be given on equipment and/or services, generating a contractual asset or liability, respectively, depending on the nature of the offer in question.

Summary of the main changes during the period:

	Contractual assets (liabilities)
Balance as at January 1, 2018	(12.305)
Additions	(23.545)
Write-off	15.052
Balance as at December 31, 2018	(20.798)

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

The estimated realization of the balances of contractual assets is described below:

	2019	2020
Contractual assets (liabilities)	(17,130)	(3,668)

In accordance with paragraph 121 of IFRS 15, the Company is not presenting the effects of contracts with customers effective for less than one year.

II) The new standards below were issued by the IASB, but they are not in force for the period ended December 31, 2018. The early adoption of these standards, although encouraged by the IASB, was not allowed in Brazil by the CVM.

- Annual improvements in IFRS – Cycle 2015 to 2017
- IFRS16 – Leases
- IFRIC23 – Uncertainty regarding income tax treatment
- IFRS9 amendments – Prepayment features with negative compensation
- IAS28 amendments – Long-term interests in associates and joint ventures
- IFRS10 and IAS28 amendments – Sale or constitution of assets between an investor and its affiliate or joint venture
- IFRS17 – Insurance contracts

Concerning the aforementioned standards, the following is worth pointing out:

IFRIC 23 – Uncertainties about the treatment of income taxes

The interpretation explains how to consider the uncertainty in recognizing income tax.

IAS 12 - Income Tax specifies how to recognize current and deferred income taxes, but not how to reflect the effects of uncertainty. For example, it may not be clear:

- How to apply the tax laws to specific transactions or circumstances;
- Or whether the tax authorities will accept a certain tax treatment used by the entity. If the entity concludes that a particular tax treatment is unlikely to be accepted, then it must use estimates (the most likely amount or expected amount) to determine the tax treatment (taxable income, tax bases, unused tax losses, unused tax credits), tax rates and so on. The decision should be based on the method that provides the best forecasts of resolution of uncertainties.

The Company's Management understands that the application of this interpretation will have no material impacts on the Company's consolidated financial statements because the Company's Management, with support from its legal counsel, considers that the main lawsuits involving income and social contribution taxes, as set forth in Note 23, are more likely than not to be sustained in court.

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

IFRS 16 – “Leases”

In July 2014, IASB issued IFRS 16, which replaced IAS 17 and refers to annual periods beginning on or after January 1st, 2019.

The new standard establishes the principles for the recognition, measurement, reporting and disclosure of leases, and requires the recognition by lessees of assets and liabilities arising from lease agreements, except for short-term contracts, that is, with a term of 12 months or less, or contracts in which the value of the underlying assets is low. In accordance with this standard, lessees must apply this pronouncement to lease agreements in two ways:

- (i) Retrospectively for each previous period presented in accordance with IAS 8 (Accounting Policies, Changes in Estimates and Correction of Errors); or
- (ii) Retrospectively, with the cumulative effect of the initial application of this pronouncement, recognized as at the date of initial application.

The Company decided to adopt IFRS16 retrospectively, while the cumulative effect of the initial application is recognized on the date of initial application, that is, January 1st, 2019. Additionally, the Company decided to take practical steps in its initial adoption of the standard, such as: (i) non-revaluation of financial lease agreements previously recognized according to IAS 17 and IFRIC 4; (ii) exclusion of lease agreements expiring in the next 12 months and unlikely to be renewed by the Company; and (iii) non-application of this new standard to agreements not previously identified as leases, using IAS 17 and IFRIC 4.

The Company has a significant number of lease agreements under which it is the lessee. Currently, a portion of these contracts are recognized as operating leases, and their payments are recorded on a straight line basis throughout the period of the contract. The Company has concluded the study of impacts of this new standard on its consolidated financial statements,

which included: (i) an estimation of the lease term, considering a non-cancelable period and the periods covered by options to extend the lease term, where such exercise depends only on the Company and is reasonably certain; (ii) a detailed review of the nature of the various lease agreements inherent in the telecommunications industry; (iii) use of assumptions to calculate the discount rate, which was based on the incremental interest rate for the period of the agreement, among others. Furthermore, given the relevance of the infrastructure lease agreements, specifically for transmission towers, the Company decided to separately recognize the lease and non-lease components for this class of assets.

The initial adoption will lead to an increase of approximately R\$5,100 million in total assets and liabilities due to the recognition of the rights of use of asset and the liabilities arising from these leases, respectively.

The increase in lease liabilities due to the recognition of the right of use of assets results an increase in the Company's net debt, being the depreciation and interest charges recognized in the statement of income as a replacement of the operating lease expenses ("rental"), in the amount approximate of R\$ 1,200 million, also resulting in a positive impact on EBITDA - Earnings Before Interest, Tax, Depreciation and Amortization ("unaudited"). Therefore, resulting in a relevant impact on certain financial indicators of the Company, as well as a corresponding increase in net cash provided by operating activities reported in the cash flows.

In qualitative terms, the main transactions to be impacted by the new standard include: lease of vehicles, lease of stores and kiosks in shopping malls, lease of sites, land and sharing of infrastructure.

Based on the studies conducted thus far, the Company does not expect the adoption of the other standards and interpretations above to have any significant impact on the Group's consolidated financial statements for 2019.

TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS -- continued

As at December 31, 2018 and 2017

(In thousands of Reais, except as indicated otherwise)

3 Estimates and areas where judgment is significant in the application of the Company's accounting policies

Accounting estimates and judgments are continuously reassessed. They are based on the Company's historical experience and other factors, such as expectations of future events, considering the circumstances as at the date of the consolidated financial statements.

By definition, the accounting estimates resulting from such assumptions rarely equal the actual outcome. The estimates and assumptions that present a significant risk of causing relevant adjustments in the book values of assets and liabilities in subsequent fiscal years are shown below:

(a) Impairment losses on non-financial assets

Losses due to impairment take place when the book value of an asset or cash generating unit exceeds its respective recoverable value, which is considered as the fair value less costs to sell and/or the value in use, whichever is greater. The calculation of the fair value less costs to sell is based on information available from sales transactions involving similar assets or market prices, less additional costs that would be incurred to dispose of those assets. The value in use is based on the discounted cash flow model. Cash flow derives from the Company's business plan. Since this is an ongoing business, from the fifth projection year a perpetual nominal growth of cash flow was estimated.

Any reorganization activities to which the Company has not yet committed itself on the consolidated financial statements disclosure date, or any material future investments aimed at improving the asset base of the cash generating unit being tested, are excluded for the purpose of impairment testing.

The recoverable value is sensitive to the discount rates used under the discounted cash flow method, as well as to the expected future cash receivables and the growth rate of revenue and expenses used for extrapolation purposes. Adverse economic conditions may lead to significant changes in these assumptions.

At December 31, 2018, based on the sensitivity analysis of the main assumptions used, no variations that could reasonably be expected were identified that could rise to a potential impairment adjustment.

The main non-financial assets valued this way were goodwill based on the future profitability recorded by the Company (Note 14).

(b) *Income tax and social contribution (current and deferred)*

Income tax and social contribution (current and deferred) are calculated in accordance with interpretations of the legislation currently in force. This process normally includes complex estimates to define the taxable income and temporary differences. In particular, deferred tax assets on income tax and social contribution losses and temporary differences are recognized to the extent that it is probable that future taxable income will be available and can be offset. The measurement of the recoverability of deferred income tax and social contribution losses carry-forward and of temporary differences takes into account the history of taxable income, as well as estimates of future taxable income (Note 10).

(c) *Provision for legal and administrative proceedings*

Legal and administrative proceedings are analyzed by the Company's Management and internal and external legal advisors. The Company's review takes into account factors such as the hierarchy of laws, case law available, recent court decisions, their relevance to the legal order, as well as payment history. Such reviews involve Management's judgment (Note 23).

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(d) Fair value of derivatives and other financial instruments

Financial instruments presented at fair value in the balance sheet are measured using evaluation techniques that take into account observable data or observable data derived from the market (Note 36).

(e) Unbilled revenue

Considering that some billing cut-off dates occur on intermediate dates within the months, at the end of each month there will be revenue already earned by the Company but not effectively billed to the customers. This unbilled revenue is recorded based on estimates which take into account data on usage, the number of days since the last billing date, among other factors (Note 26).

4 Cash and cash equivalents

These are financial assets measured at amortized cost through the effective interest rate method. The Company's Management determines the classification of its financial assets upon initial recognition.

2018

2017

Cash and banks	93,960	40,283
Unrestrictedly available financial investments:		
CDBs/Repurchases	981,570	2,920,435
	1,075,530	2,960,718

Bank Deposit Certificates (“CDBs”) and Repurchases are nominative securities issued by banks and sold to the public as a means of raising funds. Such securities can be traded during the contracted period, at any time, without any significant loss of value, and are used to repay the short-term obligations of the Company.

The annual average return on the Company’s investments in CDBs and Repurchases is 100.27% (100.92% at December 31, 2017) of the Interbank Deposit Certificate (“CDI”) rate.

5 Marketable securities

	2018	2017
FUNCINE (3)	5,229	2,997
Sovereign Fund (4)	14,472	-
FIC: (1)		
Government Securities	292,708	284,075
Repo Transactions (2)	289,352	236,095
Financial Bills	96,868	161,789
Other	91,441	83,655
	790,070	768,611
Current portion	(784,841)	(765,614)
Non-current portion	5,229	2,997

(1) In August 2017, the Company invested in open-ended Investment Funds in Units (“FICs”). The Funds are mostly made up of government securities and instruments of first-tier financial institutions. In 2018, the average yield of FICs was 100.81% of the variation of the CDI rate.

(2) “Repo Transactions” are securities issued by banks with a commitment to repurchase within one day at pre-established rates. These repo transactions are backed by federal government bonds and are used by the fund with the purpose of remunerating the capital available in cash.

(3) In December 2017, in order to use the tax benefit of deductibility for income and social contribution tax purposes the Company invested the amount of R\$3 million in the National

Film Industry Financing Fund (“FUNCINE”). In 2018, the Company opted to make new investments in FUNCINE in the months of October and December in the total amount of R\$2.4 million.

(4) The sovereign fund includes federal securities only.

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TIM PARTICIPAÇÕES S.A. AND SUBSIDIARY

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6 Trade accounts receivable

These are financial assets measured at amortized cost, and refer to accounts receivable from users of telecommunications services, from network use (interconnection) and from sales of handsets and accessories. Accounts receivable are recorded at the price charged at the time of the transaction. The balances of accounts receivable also include services provided and not billed (“unbilled”) until the balance sheet date. Accounts receivable from clients are initially recognized at fair value and subsequently measured at amortized cost using the effective interest rate method less expected credit losses (“impairment”).

The provision for expected credit losses was recognized as a reduction in accounts receivable based on the profile of the subscriber portfolio, the aging of overdue accounts receivable, the economic situation, the risks involved in each case and the collection curve, at an amount deemed sufficient by Management, as adjusted to reflect current and prospective information on macroeconomic factors that affect the customers’ ability to settle the receivables.

The fair value of trade accounts receivable equals the carrying value recorded as at December 31, 2018 and 2017. A portion of the accounts receivable from clients is used to secure the total amount of BNDES borrowing (Note 19).

	2018	2017
Trade accounts receivable	2,969,116	2,567,063
Gross accounts receivable	3,656,044	3,031,808
Billed services	1,733,229	1,390,616
Unbilled services	774,484	610,570
Network use (interconnection)	455,228	367,894
Sale of goods	691,312	661,180
Other accounts receivable	1,791	1,548
Provision for losses on expected accounts	(686,928)	(464,745)
Current portion	(2,838,808)	(2,540,856)
Non-current portion	130,308	26,207

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The non-current portion includes the amount of R\$103 million related to accounts receivable from other telephone carriers, recorded at present value considering the period and implicit interest rate in the transaction.

Change in losses from expected debts, recorded as an asset reducing account, were as follows:

	2018	2017
Opening balance	464,745	370,452
Effect of the adoption of IFRS 9 (note 2.f)	130,137	
Set-up of provision	544,881	316,387
Write-off of Provision	(452,835)	(222,094)
Closing Balance	686,928	464,745

The aging of accounts receivable is as follows:

	2018	2017
Total	3,656,044	3,031,808
Falling due	2,459,315	2,028,983
Overdue- 1 to 30 days	308,744	271,560
Overdue - 31 to 60 days	144,309	113,584
Overdue -61 to 90 days	117,759	109,568
Overdue - over than 90 days	625,917	508,113

Previous accounting policy for impairment of trade receivables

In the previous fiscal year, the impairment of receivables was valued based on the incurred loss model. Individual uncollectible receivables were written-off by means of a direct reduction in the carrying value. The remaining receivables were valued on a collective basis in order to determine if there was any objective evidence of impairment incurred that had not been identified yet. For such receivables, the estimated impairment losses were recognized in a separate provision for impairment. The Group considered that there would be evidence of impairment if any of the following indicators were present:

- Debtor facing significant financial difficulties;
- Debtor likely to file for bankruptcy or financial reorganization; and
- Default or delay to make payments (over 90 days overdue).

A provision for impairment of receivables was written off in cases where there were no further expectation of recovery.

7 Inventory

Inventories are stated at average acquisition cost. A loss is recognized to adjust the cost of handsets and accessories to their net realizable value (selling price) when this amount is less than the average acquisition cost.

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	2018	2017
Inventories	183,059	123,785
Inventories	189,826	133,899
Mobile handsets and tablets	145,819	107,195
Accessories and prepaid cards	33,621	16,156
TIM chips	10,386	10,548
Losses on adjustment to realizable amount	(6,767)	(10,114)

8. Indirect taxes, charges and contributions recoverable

	2018	2017
Indirect taxes and contributions recoverable	1,192,765	1,335,587
ICMS	1,152,741	1,296,255
Other	40,024	39,332
Current portion	(280,254)	(386,001)
Non-current portion	912,511	949,586

ICMS (value added tax on goods and services) amounts recoverable primarily refer to: (i) credits on the acquisition of property, plant and equipment directly related to the provision of telecommunication services (credits divided over 48 months), and (ii) ICMS amounts paid under the tax substitution regime from goods acquired for resale, mainly mobile handsets, chips, tablets and modems sold by TIM.

9. Direct taxes, charges and contributions recoverable

	2018	2017
Direct taxes and contributions recoverable	905,521	532,543
Income tax (IR) and social contribution (CS) (i)	414,408	434,823
PIS/COFINS (ii)	384,093	53,509
Other	107,020	44,211
Current portion	(347,505)	(323,040)
Non-current portion	558,016	209,503

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(i) The amounts corresponding to income and social contribution taxes are substantially related to: (a) advances made over the period during which the use is expected, for the year 2019; and (b) other income and social contribution tax credits from previous years whose current estimated period of use will be more than 12 months later.

(ii) The PIS/COFINS amounts recoverable refer to: (i) credits from a legal proceedings filed by TIM Nordeste S.A. (ultimately merged into TIM S.A.) with a favorable final decision in Higher Courts which discussed the exclusion of the ICMS from the PIS and COFINS tax bases for the period from 2002 through 2009.

In March 2017, the Federal Supreme Court ("STF") recognized the unconstitutionality of including ICMS amounts in the calculation base of PIS and COFINS contributions. TIM Participações, through its subsidiary TIM S.A. (previously named "Intelig Telecomunicações Ltda."), as the surviving company from the merger of TIM Celular S.A. and other entities existing in the Group in the past, which had filed proceedings of the same nature, has been challenging this issue in court since 2007 and 2006, respectively, with effects retroactive to up to five years, i.e. 2002 and 2001 respectively, as permitted. Based on the STF's opinion favorable to taxpayers, the Company, supported by the opinion of its legal consultants, ceased the inclusion of the ICMS in the calculation base of PIS and COFINS social security contributions from April 2017.

The proceedings of the subsidiary have already received favorable decisions from the Higher Court, aligning the understanding of the lower courts with the STF decision, and the appeals filed by the National Treasury have been denied based on these same arguments. Despite the request for the modulation of effects made by the Prosecutor's Office of the National Treasury, the Company, supported by its legal consultants, believes that the decision will not affect any rights claimed under the legal actions.

The Company is calculating the amounts to which it will be entitled at the end of the proceedings, which would be after the final decision is reached by the Higher Courts and without any additional appeal. The potential tax credits would amount to R\$3,296 million, of which R\$1,863 million corresponds to the principal, and R\$1,434 million to monetary adjustments. In addition to this potential tax credit, in November 2018, by reason of a final and without appeal decision, the Company recorded the amount of R\$353 million, R\$159 million of which corresponding to the principal, and R\$194 million to monetary adjustments.

10. Deferred income tax and social contribution

Deferred income tax and social contribution are recognized on: (1) accumulated income tax carried forward losses and negative basis of social contribution, and (2) temporary differences arising from differences between the tax bases of assets and liabilities and their carrying values in the consolidated financial statements. Deferred income tax is determined using the tax rates (and tax laws) enacted, or substantially enacted, up to the balance sheet date. Subsequent changes in tax rates or tax legislation may modify the deferred tax credit and debit balances.

Deferred tax assets on income tax and social contribution are recognized only in the event of a profitable track record and/or when the annual forecasts prepared by the Company, examined by the Fiscal Council and Statutory Audit Committee and approved by other management bodies, indicate the likelihood of the future realization of those tax balances.

The balances of deferred income tax and social contribution assets and liabilities are shown in the balance sheet at their net amounts, when there is both a legal right and an intention to offset them at the time when the current taxes are ascertained, usually in relation to the same legal entity and the same taxation authority. Thus, deferred tax assets and liabilities belonging to different entities are in general shown separately, not at their net amounts.

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As at December 31, 2018 and December 31, 2017, the prevailing tax rates were 25% for income tax and 9% for social contribution. The tax incentives shown in Note 24 are also being considered in deferred taxes. In addition, there is no statute of limitation in regards to the income tax and social contribution carried forward losses, which it can be offset by up to 30% of the taxable profit reached at each fiscal year, according to the current tax legislation.

The amounts recorded are as follows:

	2018	2017
Losses carried forward – income tax and social contribution	896,100	126,386
Temporary differences:		
Provision for legal and administrative proceedings	293,349	196,589
Losses on doubtful accounts	244,428	164,707
Adjustments to present value – 3G license	9,124	11,066
Deferred income tax on accounting adjustments	58,268	59,839
Lease of LT Amazonas Infrastructure	24,978	19,003
Profit sharing	22,181	40,902
Taxes with suspended enforceability	12,872	12,872
Amortized goodwill – TIM Fiber	(370,494)	(370,494)
Derivative financial instruments	(22,551)	(16,432)
Capitalized interest on 4G authorization	(301,525)	(258,175)
Deemed costs – TIM S.A.	(82,042)	(94,912)
Other	74,821	65,686
	859,509	(42,963)
Unrecognized deferred income tax and social contribution	(57,538)	(55,956)
	801,971	(98,919)

Deferred tax assets portion	801,971	-
Deferred tax liabilities portion		(98,919)

TIM S.A.

As previously communicated to the market, TIM Celular S.A. merged into TIM S.A. (previously named “Intelig Telecomunicações Ltda.”) on October 31, 2018 with the main objective of reducing the operating costs of the companies involved, creating synergies and enabling the achievement of the corporate purposes of the two companies. Thus, after the merger, tax credits may also arise from tax losses and negative social contribution base on the income of TIM S.A., considering that the latter, based on the results of TIM Celular after such merger, estimates that the taxable income will be sufficient to fully recover the deferred credits.

On September 30, 2018 the Company recorded total deferred tax assets of R\$952,368 arising from amounts that may be used as tax losses (R\$702,619) and the negative base of social contribution on income (R\$249,749), since all of the factors required for the merger were controlled by Management, such as: (i) the feasibility studies regarding the use of tax benefits was completed and approved by the Company’s governance bodies (ii) definition of the actual corporate restructuring schedule upon the merger; (iii) obtaining of approvals and/or consent of third parties (ANATEL and BNDES) by the Company, among other factors.

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Expectation of recovery of tax credits

The estimates regarding the recovery of tax assets were calculated taking into account the financial and business assumptions available at 2018 year end.

Based on these projections, the Company expects to recover the credits as follows:

	Deferred income and social contribution taxes
2019	102.835
2020	189.756
2021 onwards	603.509
Tax losses and negative base	896.100
Temporary differences	(94.129)
Total	801.971

The subsidiary has set up deferred income and social contribution tax credits on its total tax losses, negative basis of social contribution and temporary differences, based on the history of profitability and projected future taxable income.

The subsidiary used credits related to tax losses carried forward and the negative basis of social contribution in the amount of R\$85,812 for the year ended December 31, 2018

(R\$132,389 on December 31, 2017—formerly TIM Celular S.A.).

Unrecognized deferred tax assets

Considering that TIM Participações S.A. (Parent Company) does not carry out activities that could generate taxable profits, deferred tax credits arising from income tax and social contribution tax losses and temporary differences, totaling R\$107,092 on December 31, 2018 (R\$102,860 at December 31, 2017), were not recognized.

11. Prepaid expenses

	2018	2017
Prepaid expenses	346,441	207,832
Advertising not released (i)	76,651	124,387
Rentals and insurance	78,005	49,185
Network swap (ii)	11,449	20,191
Incremental costs for obtaining client contracts (iii)	173,056	
Other	7,280	14,069
Current portion	(272,060)	(168,366)
Non-current portion (iii)	74,381	39,466

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(i) Represents the early payment of expenses from the advertising of TIM brand's products and services, which were recognized in income for the period during which the advertising is broadcast.

(ii) On April 1st, 2010, the subsidiary TIM S.A. and GVT entered into an onerous contract and a reciprocal agreement for the assignment of fiber optic infrastructure (network swap), in order to expand their respective areas of operation. Given the economic nature of the transaction, the amount was recognized in the (current and non-current) prepaid expenses and deferred revenue (current and non-current) and is amortized to income according to the contract's term.

(iii) This is mainly represented by incremental costs related to sales commissions paid to sales agent in order to obtain customer contracts arising from the adoption of IFRS 15, which are amortized to income according to the benefit period., which is usually two years. The reclassified balance of the "intangible assets" account as of January 1st, 2018 was R\$128,760 (note 2.f).

12. Judicial deposits

These are recorded at their historical costs and updated according to the legislation in force:

	2018	2017
Judicial deposits	1.345.113	1.366.576

Civil	334.028	344.204
Labor	492.000	493.705
Tax	299.310	286.375
Regulatory	111	111
Online attachment (*)	219.664	242.181

(*) Refers to blocked judicial deposits directly on the Company's bank accounts and financial investments related to certain judicial proceedings. This amount is analyzed periodically and, when identified, is reclassified to one of the other specific accounts of judicial deposits.

Civil

These are court deposits to guarantee the execution of civil proceedings where the Company is challenging the amounts involved. Most of these proceedings refer to lawsuits filed by customers, involving issues of consumer rights, among others.

There are some legal proceedings challenging the amounts fixed by ANATEL to leave certain transmission sub-bands to allow the implementation of 4G technology. In this case, the updated court deposit amounted to R\$66,700 (R\$63,869 as at December 31, 2017).

Labor

These are amounts deposited in court as guarantees for the execution and the filing of appropriate appeals, where the relevant matters or amounts involved are still being discussed. The total amount has been allocated between the various claims filed by registered employees and third-party service providers.

Tax

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The Company and its subsidiary have made court deposits related to various current tax court proceedings. These deposits refer mainly to the following matters:

- (i) 2% increase in the ICMS rate for the Fund for the Eradication of Poverty ("FECP") in the State of Bahia on prepaid telephone services provided by the Company. The current value of these deposits is R\$95,322 (R\$92,066 as at December 31, 2017).
- (ii) Use of credit for the purchase of electricity used directly by the companies for production purposes. The court is likely to give a favorable judgment. The current value of these deposits is R\$74,358 (R\$71,722 as at December 31, 2017).
- (iii) Liability for CPMF (Contribution on Financial Activities) on the Company's capitalization of loans; recognition of the right not to pay contributions allegedly due on mere changes in the ownership of current accounts as a result of a takeover. The current value of these deposits is R\$10,026 (R\$9,687 as at December 31, 2017).
- (iv) Constitutionality of the collection of the Operations Monitoring Charge ("TFF") by a number of municipal authorities. The current value of these deposits is R\$16,719 (R\$15,824 as at December 31, 2017).
- (v) Failure to approve the offsetting of federal debts against credits for withholding tax ("IRRF") because it is alleged that the credits are insufficient, as well as the deposit placed to ensure the issue of a Tax Clearance Certificate. The current value of these deposits is R\$10,868 (R\$10,539 as at December 31, 2017).
- (vi) Liability for ISS (TAX on services) on import services and outsourced services; alleged failure to pay for land clearance and Base Transceiver Station ("BTS") maintenance services, for ISS on the Company's services and for ISS on co-billing services and software licensing (Blackberry). The Company's right is to take advantage of the benefit of spontaneous declaration in order to reverse confiscatory fines for late payment. The current value of these deposits is R\$7,519 (R\$7,056 as at December 31, 2017).
- (vii) Ancillary services provided for in ICMS Agreement 69/98 related to ICMS levied on amounts related to communications services charged for access, subscription, activation, habilitation availability, subscription and use of services, among others. The current value of these deposits is R\$4,793 (R\$5,937 as at December 31, 2017).
- (viii) Voluntary reporting of tax debits and consequent cancellation of charging of fine for late payment. The current value of these deposits is R\$4,485 (R\$4,381 as at December 31, 2017).
- (ix) Deposit made by TIM S.A. related to the unconstitutionality and illegality of charging by the Telecommunications Services Universalization Fund ("FUST"). Plea for the recognition of the right not to pay FUST, and not to include in its calculation base interconnection and Industrial Exploration of Dedicated Line ("EILD") revenue, as well as for the right not to

be charged retroactively for differences arising from failure to comply with ANATEL Ruling 7/2005. The current value of these deposits is R\$56,088 (R\$53,128 as at December 31, 2017).

13 Property, plant and equipment

Property, plant and equipment are stated at acquisition and/or construction cost, less accumulated depreciation and impairment losses (the latter only if applicable). Depreciation is calculated based on the straight line method over terms that take into account the expected useful lives of the assets and their residual values.

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The estimated costs of dismantling towers and equipment on rented properties are capitalized and depreciated over the estimated useful lives of these assets. The Company recognizes the present value of these costs in property, plant and equipment with a counter-entry to the liability "provision for future asset retirement". Interest incurred on updating the provision is classified within financial expenses.

Gains and losses on disposal are determined by comparing the amounts of these disposals with the carrying values at the time of the transaction and that are recognized in "other operating expenses (revenue), net" in the statement of income.

(a) Changes in property, plant and equipment

	Balance for 2017	Additions/ (Depreciation)	Disposals	Transfers
Total cost of property, plant and equipment, gross	31,166,905	2,746,039	(80,141)	
Commutation/transmission equipment	18,766,840	8,974	(48,203)	2,071
Fiber optic cables	683,971	20		7
Leased handsets	2,181,630		(15,675)	14
Infrastructure	5,652,840	678	(4,562)	48
Informatics assets	1,615,325	9	(9,511)	7
General use assets	739,439	286	(2,018)	5
Land	40,794			
Construction in progress	1,486,066	2,736,072	(172)	(2,921)
Accumulated depreciation	(20,328,417)	(2,371,362)	70,598	
Commutation/transmission equipment	(13,373,003)	(1,610,326)	47,260	
Fiber optic cables	(290,699)	(54,833)		
Leased handsets	(2,016,018)	(124,709)	8,500	

Infrastructure	(2,697,878)	(463,856)	3,844	
Informatics assets	(1,448,694)	(72,885)	9,465	
General use assets	(502,125)	(44,753)	1,529	
Total property, plant and equipment, net	10,838,488	374,677	(9,543)	
Commutation/transmission equipment	5,393,837	(1,601,352)	(943)	2,07
Fiber optic cables	393,272	(54,813)		7
Leased handsets	165,612	(124,709)	(7,175)	14
Infrastructure	2,954,962	(463,178)	(718)	48
Informatics assets	166,631	(72,876)	(46)	7
General use assets	237,314	(44,467)	(489)	5
Land	40.794			
Construction in progress	1.486.066	2.736.072	(172)	(2.92

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	Balance for	Additions/	Disposals	Transfers	Balance for
	2016	(Depreciation)			2017
Total Cost of Property, Plant and Equipment, Gross	29,259,831	2,308,979	(78,280)	(323,625)	31,166,905
Commutation/transmission equipment	17,232,254	28,694	(57,683)	1,563,575	18,766,840
Fiber optic cables	600,504	3	-	83,464	683,971
Leased handsets	2,071,334	-	(10,502)	120,798	2,181,630
Infrastructure	5,269,043	238	(15,195)	398,754	5,652,840
Informatics assets	1,550,614	113	(1)	64,599	1,615,325
General use assets	675,682	18	(258)	63,997	739,439
Land	40,794	-	-	-	40,794
Construction in progress	1,819,606	2,279,913	5,359	(2,618,812)	1,486,066
Accumulated Depreciation	(18,175,301)	(2,180,221)	27,104	1	(20,328,417)
Commutation/transmission equipment	(11,969,208)	(1,417,827)	14,054	(22)	(13,373,003)
Fiber optic cables	(242,709)	(47,990)	-	-	(290,699)
Leased handsets	(1,905,228)	(114,370)	3,580	-	(2,016,018)
Infrastructure	(2,224,932)	(482,463)	9,211	306	(2,697,878)
Informatics assets	(1,372,663)	(76,080)	1	48	(1,448,694)
General use assets	(460,561)	(41,491)	258	(331)	(502,125)
Total property, plant and equipment, net	11,084,530	128,758	(51,176)	(323,624)	10,838,488
Commutation/transmission equipment	5,263,046	(1,389,133)	(43,629)	1,563,553	5,393,837
Fiber optic cables	357,795	(47,987)	-	83,464	393,272
Leased handsets	166,106	(114,370)	(6,922)	120,798	165,612
Infrastructure	3,044,111	(482,225)	(5,984)	399,060	2,954,962

Informatics assets	177,951	(75,967)	-	64,647	166,631
General use assets	215,121	(41,473)	-	63,666	237,314
Land	40,794	-	-	-	40,794
Construction in progress	1,819,606	2,279,913	5,359	(2,618,812)	1,486,066

Construction in progress represents the cost of projects in progress related to the construction of network and/or other intangible assets over the period of their construction and installation, until the date when they start operating, when they will be transferred to their corresponding asset accounts.

(b) Depreciation rates

	Annual rate %
Commutation/transmission equipment	8 to 14.29
Fiber optic cables	4 to 10
Free-leased handsets	14.28 to 50
Infrastructure	4 to 20
Informatics assets	10 to 20
General use assets	10 to 20

In 2018, pursuant to IAS 16, the Company and its subsidiaries assessed the useful life estimates for their property, plant and equipment, concluding that there were no significant changes or alterations to the circumstances on which the estimates were based that would justify changes to the useful lives currently in use. To determine the useful lives of the assets, the Company considers not just the type of asset, but also the way it is used and the conditions in which the asset is used.

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14 Intangible assets

Intangible assets are measured at historical cost less accumulated amortization and impairment losses (if applicable), and reflect: (i) the purchase of authorizations and rights to use radio frequency bands, and (ii) software in use and/or development. Intangibles also include: (i) the purchase of the right to use the infrastructure of other companies, (ii) customer lists, (iii) goodwill on purchases of companies, and (iv) costs of commission paid to dealers to obtain a new client.

Amortization charges are calculated using the straight line method over the estimated useful life of the assets contracted and over the terms of the authorizations and in the case of costs of commission for the term of the agreement, as mentioned in Note (h) below. The useful life estimates of intangible assets are reviewed regularly.

Any financial charges on funds raised (that is, without a specific destination) and used to obtain a qualifying asset, meaning an asset that requires a significant time to be ready for use, are capitalized as a portion of the cost of the asset when it is likely to bring future economic benefits to the entity and such costs can be accurately measured. These costs are amortized throughout the estimated useful lives of the assets.

The amounts of the SMP authorizations and rights to use radio frequencies, as well as software, goodwill and other items, were recorded as follows:

(a) Changes in intangibles

	Balance for 2017	Additions/ (Amortization)	Transfers	Disposals	Capitalized Interests	Balance for 2018
Total cost of intangible assets, gross	28,549,552	1,139,993	(479,811)	(1,270)	158,315	29,366,779
Right to use software	15,957,808		1,186,103	(1,270)		17,142,641
Authorizations	6,391,394	94,148	1,153,428			7,638,970
Goodwill	1,527,219					1,527,219
Cost of deferred commission to dealers	384,455		(384,455)			
List of clients	95,200	-	(95,200)	-	-	-
Right to use the infrastructure of LT Amazonas	198,202					198,202
Other assets	270,687		36,967			307,654
Intangible assets under development	3,724,587	1,045,845	(2,376,654)		158,315	2,552,093
Accumulated amortization	(17,237,025)	(1,799,914)	350,894	1,270		(18,684,775)
Right to use software	(12,265,391)	(1,416,965)		1,270		(13,681,086)
Authorizations	(4,497,758)	(347,884)				(4,845,642)
Cost of deferred commission to dealers	(255,694)		255,694			
List of clients	(95,200)		95,200	-	-	-
Right to use the infrastructure of LT Amazonas	(42,531)	(9,910)				(52,441)
Other assets	(80,451)	(25,155)				(105,606)
Total intangible assets, net	11,312,527	(659,921)	(128,917)		158,315	10,682,004
Right to use software (c)	3,692,417	(1,416,965)	1,186,103			3,461,555
Authorizations	1,893,636	(253,736)	1,153,428			2,793,328
Goodwill (d)	1,527,219					1,527,219
Cost of deferred commission to dealers (Note 2.f)	128,761		(128,761)			
Right to use the infrastructure of LT	155,671	(9,910)				145,761

Amazonas (f)					
Other assets	190,236	(25,155)	36,967		202,048
Intangible assets					
under development	3,724,587	1,045,845	(2,376,654)	158,315	2,552,093
(g)					

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	Balance for	Additions/			Capitalized	Balance for
	2016	(Amortization)	Transfers	Disposals	Interests	2017
Total Cost of Intangible Assets, Gross	26,028,791	1,932,844	323,625	-	264,292	28,454,352
Right to use software	14,612,475	-	1,345,333	-	-	15,957,808
Authorizations	5,399,023	50,045	942,326	-	-	6,391,394
Goodwill	1,527,219	-	-	-	-	1,527,219
Cost of deferred commission to dealers	203,892	180,563	-	-	-	384,455
Right to use the infrastructure of LT	198,202	-	-	-	-	198,202
Amazonas						
Other assets	198,198	17,425	55,064	-	-	270,687
Intangible assets under development	3,794,582	1,684,811	(2,019,098)	-	264,292	3,724,587
Accumulated Amortization	(15,396,216)	(1,833,451)	-	(7,358)	-	(17,237,025)
Right to use software	(10,880,739)	(1,377,294)	-	(7,358)	-	(12,265,391)
Authorizations	(4,235,831)	(261,927)	-	-	-	(4,497,758)
Cost of deferred commission to dealers	(101,911)	(153,783)	-	-	-	(255,694)
Right to use the infrastructure of LT	(32,621)	(9,910)	-	-	-	(42,531)
Amazonas						

Other assets	(58,314)	(22,137)	-	-	-	(80,451)
Total Intangible assets, net	10,632,575	99,393	323,625	(7,358)	264,292	11,312,527
Right to use software (c)	3,731,736	(1,377,294)	1,345,333	(7,358)	-	3,692,417
Authorizations	1,163,192	(211,882)	942,326	-	-	1,893,636
Goodwill (d)	1,527,219	-	-	-	-	1,527,219
Cost of deferred commission to dealers (note 2.f)	101,981	26,780	-	-	-	128,761
Right to use the infrastructure of LT	165,581	(9,910)	-	-	-	155,671
Amazonas (f)						
Other assets	139,884	(4,712)	55,064	-	-	190,236
Intangible assets under development (g)	3,794,582	1,684,811	(2,019,098)	-	264,292	3,724,587

Construction in progress represents the cost of projects in progress related to the acquisition of 4G authorizations and/or other intangible assets during the period of their construction and installation, up to the moment when they enter into operation, whereupon they will be transferred to the corresponding accounts for these assets. In addition, these intangible assets were assessed for impairment as at December 31, 2018 and 2017, with no necessary adjustment.

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(b) Amortization rates

	Annual rate %
Right to use software	20
Authorizations	5 to 50
Cost of deferred commission to dealers	50
List of clients	18
Right to use infrastructure	5
Other assets	7 to 10

(c) Right to use software

The costs associated with maintaining software are recognized as expenses as they are incurred. Identifiable and unique development costs that are directly attributable to the design and testing of software products controlled by the Group are recognized as intangible assets when all capitalization criteria are met.

Directly attributable costs, which are capitalized as part of the software product, include costs for employees directly allocated to its development.

(d) Goodwill from previous years

The Company and its subsidiary have the following goodwill based on expectations of future profitability as at December 31, 2018 and December 31, 2017:

Goodwill on acquisition of TIM S.A. - The goodwill arising from the acquisition of TIM S.A. (formerly Intelig) in December 2009 in the amount of R\$210,015 is based on the subsidiary's expected profitability. The recoverability of goodwill is tested annually through impairment testing.

Goodwill from TIM Fiber SP and TIM Fiber RJ acquisitions - At the end of 2011, the subsidiary acquired Eletropaulo Telecomunicações Ltda. (which subsequently had its trade name changed to TIM Fiber SP Ltda. – “TIM Fiber SP”) and AES Communications Rio de Janeiro S.A. (which subsequently had its trade name changed to TIM Fiber RJ S.A. – “TIM Fiber RJ”). These companies were SCM providers in the main municipalities of the Greater São Paulo and Greater Rio de Janeiro areas, respectively.

TIM Fiber SP Ltda. and TIM Fiber RJ. S.A. were merged into the subsidiary on August 29, 2012.

The subsidiary recorded the goodwill allocation related to the purchase of the companies TIM Fiber SP and TIM Fiber RJ, at the end of the purchase price allocation process, in the amount of R\$1,159,648.

Goodwill from the acquisition of minority interests in TIM Sul and TIM Nordeste - In 2005, the Company acquired all the shares of the minority shareholders of TIM Sul and TIM Nordeste, in exchange for shares issued by TIM Participações, converting these companies into full subsidiaries. The goodwill resulting from this transaction amounted to R\$157,556.

As required by the accounting standards, the Company tests goodwill on business combinations involving TIM Group companies annually for impairment, and the methods and assumptions used by Management in the impairment testing of goodwill mentioned above are summarized below:

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The Company's Management understands that the smaller cash generating units, for the purposes of testing the impairment of goodwill on the purchase of the aforementioned companies, refer to the business at a consolidated level, and therefore should be assessed at the level of TIM Participações. This methodology is aligned with the strategic direction of the Company and its subsidiary.

Consequently, the impairment testing of the goodwill used this CGU (TIM Participações) and the value in use method, with the principal assumptions used in impairment testing being summarized below:

- Progressive decrease of the prepaid customers base and, in accordance with the historical trend and the industrial plan/budget, this is being offset by greater penetration of postpaid services, in line with the Company's business plan prepared for the period of 3+2 years, when the cash flow will stabilize and the growth can be estimated based on perpetuity.
- Operation and maintenance cost estimates considering the change in the client base, occasional scale gains and inflation effects. The inflation rate expected by the Company for operational expenses (3.97% p.a. on average) is in line with the estimates prepared by representative market institutions.
- Considering that it is an ongoing business, from the fifth year, a perpetual nominal growth rate of cash flow of 2.50% p.a. was estimated.
- The discount rate for the estimated future cash flow was 10.70% p.a., while 14.77% is the equivalent discount rate to the same value in use excluding the impact of income taxes from the future cash flow.

The impairment testing on December 31, 2018 showed no need for a provision for losses.

(e) List of clients

As part of the purchase price allocation process involving the acquisitions of TIM Fiber SP Ltda. and TIM Fiber RJ S.A., contractual rights were identified for the companies acquired to provide future services. These contractual rights were evaluated at their fair value as at the acquisition date and are amortized in accordance with their estimated useful life on the same date.

(f) Infrastructure use rights - LT Amazonas

The subsidiary signed agreements for the right to use the infrastructure of companies that operate electric power transmission lines in Northern Brazil. Such agreements fall within the scope of IFRIC 4 and are classified as financial leases.

Additionally, the subsidiary entered into network infrastructure sharing contracts with Telefônica Brasil S.A. also in the Northern region. In these contracts, both operators optimize resources and reduce their operational costs (Note 15).

(g) Auction and payment of 4G License 700 MHz

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Intangible assets in progress are substantially represented by costs for the development of 4G technology, which include: (i) amounts paid to obtain 4G Licenses; (ii) costs for cleaning the 700 MHZ frequency band; and (iii) financial costs capitalized on qualified assets, as detailed below:

- (i) On September 30, 2014, the subsidiary purchased Lot 2 in the Auction of the 700 MHz band in the amount of R\$1,739 million. In December 2014, the Company paid R\$1,678 million. The remaining balance of R\$61 million was recorded as debt, as provided for in the call notice.

The subsidiary is challenging the remaining balance with Anatel, which is subject to interest rates of 1% p.m. and monetary adjustment at the IGP-DI. These amounts are capitalized by the Company. The impact on the balance for the fiscal year ended December 31, 2018 was R\$5,611 (R\$8,313 on December 31, 2017) of interest and R\$5,930 (R\$443 on December 31, 2017) of monetary adjustments.

- (ii) Additionally, as determined in the call notice, the Company has borne the costs for the cleaning of the frequency band purchased. The nominal amount due from the Company in relation to the cleaning of the 700 MHZ frequency of the lot purchased was R\$904 million. The Company had also an additional cost of R\$295 million related to the portion that has not been bought in the auction, and that was subsequently split by ANATEL among the companies that won the auction, totaling R\$1,199 million.

In order to perform the spectrum cleaning activities, in March 2015 TIM, together with other companies that won the auction, have constituted a Redistribution and Digitalization Management Entity for TV and RTV Channels, named "*Entidade Administradora da Digitalização*", or "EAD". From 2015 to 2018, TIM, along with the other companies that won the auction, will disburse amounts in accordance with the schedule provided for in the public notice to cover the EAD costs related to these cleaning activities. Because the amount payable of R\$1,199 million relates to a long-term obligation, it was reduced by R\$47 million through an adjustment to present value ("AVP"). The Company made the payments as at April 9, 2015, January 26, 2017 and January 16, 2018 in the amounts of R\$370,379, R\$858,991 and R\$142,862, respectively.

The license mentioned above relates to the concept of a qualifying asset. Consequently, the finance charges on funds raised without a specific destination, used for the purpose of obtaining a qualifying asset, are capitalized at the average rate of 8.37% per annum in connection with the borrowing and financing in force during the period. The amount capitalized during the period ended December 31, 2018 was R\$152,480 (R\$251,904 as at December 31, 2017).

15 Finance leases

Leases in which the Company, as the lessee, substantially holds all of the risks and benefits of ownership, are classified as financial leases, which are capitalized at the beginning of the lease at the lower of the fair value of the leased item and the present value of the payments provided for in the agreement. Interest related to the leases is taken to income as financial costs over the term of the contract.

The subsidiary entered into tower lease agreements, as a lessee, arising from a sale and financial leaseback operation involving the sale of an asset and the concomitant lease of the same asset by the purchaser to the seller.

The subsidiary recognized a liability corresponding to the present value of the compulsory minimum installments under the agreement.

Leases in which the Company, as lessor, substantially transfers the risks and benefits of the ownership to the other party (the lessee) are classified as financial leases. These lease values are transferred from the intangible assets of the Company and are recognized as a lease receivable at the lower of the fair value of the leased item and/or the present value of the receipts provided for in the agreement. Interest related to the lease is taken to income as financial income over the contractual term.

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Asset leases are financial assets registered and/or measured at amortized cost.

Assets

	2018	2017
LT Amazonas	208,049	205,331
	208,049	205,331
Current portion	(22,491)	(19,773)
Non-current portion	185,558	185,558

LT Amazonas

As a result of the agreement entered into with LT Amazonas, the subsidiary entered into network infrastructure sharing agreements with Telefônica Brasil S.A. Under these agreements, the subsidiary and Telefônica Brasil S.A. make joint investments in the Northern region of Brazil. The subsidiary has receivables against Telefônica Brasil S.A. that have to be paid on a monthly basis for a period of 20 years. These amounts are annually restated by IPC-A. The consolidated nominal amount of future installments receivable by the subsidiary is R\$499,823.

The table below includes the schedule of cash receipts for the agreement currently in force. The amounts represent the cash receipts estimated in the signed agreements, and are stated at their nominal amounts. It is worthwhile noting that these balances differ from those shown in the books since, in the case of the latter, the amounts are shown at their present value:

	Nominal amount	Present value
Up to December 2019	23,049	22,491
January 2020 to December 2023	104,871	38,594
January 2024 onwards	360,767	146,964
	488,687	208,049

The present value of installments receivable is R\$208,049 (R\$205,331 as at December 31, 2017), of which R\$185,558 is principal and R\$22,491 is interest accrued up to December 31, 2018. These amounts were estimated as at the date of execution of agreements entered into with the transmission companies, projecting future cash receipts discounted at 12.56% per annum.

Liabilities

	2018	2017
LT Amazonas (i)	359,987	351,063
Sale of Towers (<i>leaseback</i>) (ii)	1,501,695	1,466,895
Other (iii)	78,392	69,214
	1,940,074	1,887,172
Current portion	(205,048)	(176,925)
Non-current portion	1,735,026	1,710,247

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i) LT Amazonas

The subsidiary executed agreements for the right to use the infrastructure of companies that operate electric power transmission lines in Northern Brazil ("LT Amazonas"). The terms of these agreements are for 20 years, counted from the date on which the assets are ready to operate. The contracts provide for monthly payments to the electric power transmission companies, restated annually at the IPCA.

The table below presents the future payment schedule for the agreements in force. These amounts represent the estimated disbursements under the agreements executed with distributors, and are shown at their nominal amounts. These balances differ from those shown in the books since, in the case of the latter, the amounts are shown at present value:

	Nominal amount	Present value
Up to December 2019	43,779	38,255
January 2020 to December 2023	199,193	64,391
January 2024 onwards	685,498	257,341
	928,470	359,987

The consolidated nominal value of future installments due from the subsidiary is R\$928,470. Its present value is R\$359,987, composed of R\$313,001 of principal and R\$46,986 of interest as at December 31, 2018, was estimated on the date on which the agreements were signed with the transmission companies by projecting the future payments and discounting these at 14.44% per annum. Additionally, the right to use balance of LT Amazonas also includes R\$70,759 related to investments in property, plant and equipment made by the subsidiary and subsequently donated to the electric power transmission companies. These donations are

already included in the contract signed by the parties.

ii) Sale and Leaseback of Towers

The subsidiary entered into two Sales Agreements with American Tower do Brasil Cessão de Infraestruturas Ltda. (“ATC”) in November 2014 and January 2015 for up to 6,481 telecommunications towers then owned by TIM Celular, for an amount of approximately R\$3 billion, and a Master Lease Agreement (“MLA”) for part of the space on these towers for a period of 20 years from the date of transfer of each tower, under a sale and leaseback transaction, with a provision for monthly rental amounts depending on the type of tower (greenfield or rooftop). The sales agreements provide for the towers to be transferred in tranches to ATC, due to the need to meet certain conditions precedent.

In total, 5,873 transfers of towers occurred, being 54, 336 and 5,483 in the years 2017, 2016 and 2015, respectively. This transaction resulted in a sales amount of R\$2,651,247, of which R\$1,088,390 was booked as deferred revenue and will be amortized over the period of the contract (Note 22).

The discount rate used in the transaction was determined on the basis of observable market transactions that the Company (the lessee) would have to pay under a similar lease or loan, as mentioned below.

The table below includes the schedule of payments of the agreement in force in relation to the MLA. The amounts represent the disbursements estimated in the agreement signed with ATC, stated at their nominal amounts. It should be noted that these balances differ from those shown in the books since, in the case of the latter, the amounts are shown at their present values:

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	Nominal amount	Present value
Up to December 2019	178,994	146,792
January 2020 to December 2023	810,060	330,278
January 2024 onwards	3,484,135	1,024,625
	4,473,189	1,501,695

The consolidated nominal amount of the sum of future installments payable by the subsidiary is R\$4,473,189. The present value is R\$1,501,695, of which R\$1,354,903 was principal and R\$146,792 was interest as at December 31, 2018. The present value was estimated by projecting future payments discounted at the discount rates used on the transaction date, ranging from 11.01% to 17.08% per annum, and which were determined on the basis of observable market transactions that the Company (the lessee) would have to pay under a similar lease and/or loan.

iii) Substantially represented by the financial leases of new transmission towers.

16 Regulatory credits recoverable

These refer to Fistel credit ("Fundo de Fiscalização das Telecomunicações") amounts arising from the reduction of the client base, which may be offset by future changes in the base, or used to reduce future obligations, and are expected to be used toward settlement of the TFF ("Taxa de Fiscalização de Funcionamento") payable to Fistel annually in the month of March.

17 Suppliers

Supplier accounts payable are obligations to pay for goods or services that were purchased in the normal course of business. They are initially recognized at fair value and subsequently measured at amortized cost using the effective interest rate method. Given the short maturity terms of these obligations, in practice they are usually recognized at the invoice value.

	2018	2017
	4,323,374	3,986,557
Local currency	4,158,599	3,868,603
Suppliers of materials and services (a)	4,027,092	3,649,543
Interconnection (b)	98,060	155,114
Roaming (c)	162	1,051
Co-billing (d)	33,285	62,895
Foreign currency	164,775	117,954
Suppliers of materials and services (a)	137,397	80,869
Roaming (c)	27,378	37,085
Current portion	4,323,374	3,986,557

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(a) Represent the amounts to be paid to suppliers for acquisitions of materials and for the provision of services relating to tangible and intangible assets or for consumption in operations, maintenance and management, as provided for in the agreement between the parties.

(b) This refers to the use of the networks of other landline and mobile telephone operators, with calls being initiated from TIM's network and ending on the networks of other operators.

(c) This refers to calls made by customers outside their registration area, who are therefore considered visitors to other operator networks.

(d) This refers to calls made by a customer who has used another long-distance operator.

18 Authorizations payable

As at December 31, 2018, the Company and its subsidiary had the following commitments to ANATEL:

	2018	2017
Renewal of authorizations (i)	300.253	262.513
700 MHz frequency band cleaning, net of AVP (ii)	-	141.659
Updated ANATEL Debt (ii)	113.547	98.451
Guarantee insurance on authorizations		4.077
	413.800	506.700

Current portion	(65.464)	(233.173)
Non-current portion	348.336	273.527

- (i) In order to provide SMP services, the subsidiary obtained radio frequency authorizations for a fixed period, renewable for a further 15 years. The extension of the right of use includes the payment of 2% of the net revenue recorded in the regions covered by the authorization that ends every two years. As at December 31, 2018, the subsidiary had balance due related to the renewal of authorizations in the amount of R\$300,253 (R\$262,513 as at December 31, 2017).
- (ii) On December 05, 2014 the subsidiary signed an Authorization Instrument for the 700 MHz band and paid an amount equivalent to R\$1,678 million, recording the remaining balance of R\$61 million as financial liability, according to the payment method provided for in the call notice. Due to the absence of bids for some lots in the Call Notice for the 700 MHz band, the subsidiary, along with other bidders, had to bear a proportion of the costs of these lots. Thus, the EAD was organized, with respect to which the total commitment assumed by the subsidiary was R\$1,199 million. This amount was paid in four installments adjusted by the IGP-DI (Note 14.g).

As at June 30, 2015, the subsidiary filed a lawsuit challenging a surplus charge of R\$61 million (R\$150 million as at December 31, 2018), which is still pending trial.

On February 15, 2016, the subsidiary entered into Amendments to the Authorization Instruments for the 700 MHz band in order to postpone the date of payment of the 2nd installment of 30% to the EAD.

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Accordingly, on January 31, 2017, the entity received from the subsidiary the amount of R\$859 million, corresponding to 60%, regarding the installments for the years 2016 and 2017. The fourth and last installment of 10% was paid to EAD on January

31, 2018, in the amount of R\$142.9 million.

The authorizations held on a primary basis by TIM S.A. on December 31, 2018, as well as their maturity dates, are detailed below:

Authorization instruments	450 MHz	800 MHz, 900 MHz and 1,800 MHz	Additional frequencies 1,800 MHz	Maturity date		2,500 MHz (P** Band (4G)	700 MHz (P** Band (4G)
				1,900 MHz and 2,100 MHz (3G)	2,500 MHz V1 Band (4G)		
Amapá, Roraima, Pará, Amazonas and Maranhão	-	March, 2031*	April, 2023	April, 2023	October, 2027	Part of AR92 (PA) – February, 2024*	December, 2024*
Rio de Janeiro and Espírito Santo	October, 2027	March, 2031*	ES - April, 2023	April, 2023	October, 2027	(RJ) – February, 2024*	December, 2024*
Acre, Rondônia, Mato Grosso, Mato Grosso do Sul, Tocantins, Distrito Federal, Goiás, Rio Grande do Sul (except the municipality of Pelotas and region) and the municipalities of Londrina and Tamarana, in	PR - October, 2027	March, 2031*	April, 2023	April, 2023	October, 2027	Part of AR61 (DF) – February, 2024*	December, 2024*

Paraná

São Paulo	-	March, 2031*	Countryside - April, 2023	April, October, 2023 2027	-	Dec 2
Paraná (except the municipalities of Londrina and Tamarana)	October, 2027	September, 2022*	April, 2023	April, October, 2023 2027	AR 41, except Curitiba and Metropolitan Region - February, 2024*	Dec 2
					AR41, Curitiba and Metropolitan Region -July, 2031	
Santa Catarina	October, 2027	September, 2023*	April, 2023	April, October, 2023 2027	-	Dec 2
Municipality and region of Pelotas, in the State of Rio Grande do Sul	-	April, 2024*	-	April, October, 2023 2027	-	Dec 2
Pernambuco	-	May, 2024*	-	April, October, 2023 2027	Part of AR81-July, 2031	Dec 2
Ceará	-	November, 2023*	-	April, October, 2023 2027	-	Dec 2
Paraíba	-	December, 2023*	-	April, October, 2023 2027	-	Dec 2
Rio Grande do Norte	-	December, 2023*	-	April, October, 2023 2027	-	Dec 2
Alagoas	-	December, 2023*	-	April, October, 2023 2027	-	Dec 2
Piauí	-	March, 2024*	-	April, October, 2023 2027	-	Dec 2
Minas Gerais (except the municipalities of the PGO sector 3 for 3G the radio frequencies and others)	-	April, 2028*	April, 2023	April, October, 2023 2027	Part of AR31 - February, 2030*	Dec 2
Bahia and Sergipe	-	August, 2027*	-	April, October, 2023 2027	-	Dec 2

*Agreements already renewed for 15 years, and therefore TIM is not entitled to a further renewal period.

** Only complementary areas in some specific States.

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19 Borrowing and financing

These are recorded as financial liabilities measured at amortized cost, being represented by non-derivative financial liabilities that are not usually traded before maturity.

They are initially recognized at fair value, and subsequently measured based on the effective interest rate method. The appropriation of financial expenses based on the effective interest rate method is recorded in income, under financial expenses.

Description	Currency	Charges	Maturity	2018	2017
BNDES (1)	URTJLP	TJLP to TJLP + 3.62%p.a.	Dec/19 to Jul/22	578,312	1,945,140
BNDES (1)	UM143	SELIC + 2.52% p.a.	Jul/22	489,421	1,911,383
BNDES (PSI) (1)	R\$	2.50% to 4.50% p.a.	Dec/19 to Jan/21	56,804	263,972
KFW (2)	USD	Libor 6M+ 1.35% p.a.	Apr/19	43,420	110,937
KFW Finnvera (2)	USD	Libor 6M+ 0.75% p.a.	Dec/25	378,595	260,522
Cisco Capital (3)	USD	1.80% to 2.50% p.a.	Nov/19 to Dec/20	116,465	198,990
Total				1,663,017	4,690,944
Current				(698,728)	(1,351,860)
Non-Current				964,289	3,339,084

Guarantees:

- (1) Guaranteed by the holding company TIM Participações and collateral of some receivables of the subsidiary.
- (2) Guaranteed by the holding company TIM Participações.
- (3) No guarantee.

The parent company TIM Participações did not have borrowing and financing as at December 31, 2018 and 2017.

The financing arranged by the subsidiary with BNDES was raised for the purpose of expanding the mobile phone network. The agreements include covenants that require certain financial ratios to be attained, calculated semi-annually. The parent company, TIM Participações, has complied with these financial ratios.

On December 31, 2017, the Company prepaid R\$800 million of the debt to BNDES, reducing the debit balance of the facility. In 2018, another R\$2,200 million was paid in advance. The decrease in the debt balance with BNDES did not change the original payment schedule of the payments due to the Bank, the last installment of which matures in July 2022. All prepayments made were intended to enable the Company effectively to manage its indebtedness and cash.

In May 2018, the Company obtained a new credit line of R\$1,500,000 from BNDES to finance investments in property, plant and equipment (Capex) for the 2017-2019 period. As at December 31, 2018, the Company had not used said credit facility, which will be available for use until December 2019, and its disbursement is not mandatory. The cost of this credit facility is indexed to the variations in the Long-Term Interest Rate ("TJLP") plus interest of 1.95% per year.

In September 2018, the Company obtained the third tranche of the financing agreement in foreign currency to KFW Finnvera, in the amount of US\$40 million (or R\$167 million). In order to eliminate foreign exchange risk, a swap was contracted in advance to cover the whole debt amortization schedule.

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The table below sets forth the status of the financing and credit facilities available:

Type	Currency	Date of opening	Term	Total amount	Undrawn balance	Amount used as at December 31, 2018
BNDES (1)	TJLP	May/18	Dec/18	1,090,000	1,090,000	-
BNDES (2)	TJLP	May/18	Dec/19	20,000	20,000	-
BNDES	TJLP	May/18	Dec/19	390,000	390,000	-
Total R\$				1,500,000	1,500,000	-

Purpose:

- (1) Support for the TIM investment plan for the years 2017 to 2019 including, but not limited to, the acquisition of Brazilian equipment.
- (2) Investment in social projects involving the community.
- (3) Investment solely toward the purchase of machinery and equipment, industrial systems and/or other components manufactured in the country.

The Investment Sustainment Program ("PSI") financing lines, obtained from BNDES, refer to specific programs of this institution and have interest rates lower than those used in BNDES' ordinary operations. The balance as at December 31, 2018, corresponding to the adjustment of the subsidy granted by the BNDES for all the PSI lines, was approximately R\$70 million. This amount was recorded in "Deferred Revenue" under the "Government Subsidies" (Note 22) line and deferred for the useful life of the asset being financed and appropriated to income in "Subsidy income" (Note 28).

The subsidiary has swap transactions to protect itself fully against any devaluation of the Brazilian currency against the US Dollar in its borrowing and financing transactions. Nevertheless, this is not classified as hedge accounting.

The long-term portions of borrowing and financing on December 31, 2018 mature as follows:

2020	343,598
2021	293,899
2022	198,625
2023	32,111
2024	75,602
2025	20,454
	964,289

The table below includes the schedule of nominal values of borrowing and financing estimated until the termination of the agreements.

	Nominal Value
2019	787,188
2020	396,786
2021	323,482
2022	206,944
2023	34,577
2024	76,614
2025	20,569
	1,846,160

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Borrowing fair value

In Brazil there is no consolidated long-term debt market with the characteristics of the BNDES facilities. In addition to the returns on long-term debt, the institutions take into account the social benefits of each project for which financing is granted. For the purposes of the fair value analysis, given the absence of a similar market and the requirement that the projects address governmental interests, the fair value of the borrowing is usually taken to be that shown in the accounting records.

The amount of PSI credit lines is recorded at fair value as at the withdrawal date, and the fair value is calculated considering the CDI rate as at the withdrawal date.

Another transaction contracted with extremely specific features is the financing obtained from KFW Finnvera. This transaction is secured by Finnvera, a Finnish development agency. Given the features of this transaction, the Company believes that its fair value is equal to that shown in the balance sheet.

Regarding the funds raised with Cisco Capital and KFW, current market conditions do not indicate the existence of any factor that might lead to a fair value for these transactions different to that shown in the accounting records.

20 Indirect taxes, charges and contributions payable

	2018	2017
Indirect taxes, charges and contributions payable	453,941	307,793

Value added tax on goods and services - ICMS	361,558	236,230
ANATEL taxes and charges	21,320	20,431
ISS	59,764	47,485
Others	11,299	3,647
Current portion	(451,169)	(305,266)
Non-current portion	2,772	2,527

21 Direct taxes, charges and contributions payable

The current income tax and social contribution charges are calculated based on the tax laws enacted or substantially enacted up to the balance sheet date.

Brazilian tax legislation allows companies to choose quarterly or monthly payments of income tax and social contribution. From 2016 onward, the Company chose to make monthly payment of income tax and social contribution.

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	2018	2017
Direct taxes, charges and contributions payable	542,213	467,574
Income tax and social contribution	372,467	391,813
PIS/COFINS	76,072	38,880
Other (*)	93,674	36,881
Current portion	(332,333)	(260,786)
Non-current portion	209,880	206,788

(*) Basically refers to the subsidiary joining, since 2009, the REFIS program, a federal fiscal program that permits the companies to pay the debts due on federal taxes (PIS, COFINS, IR and CSLL) in installments, the final maturity of which will be on October 31, 2024.

22 Deferred revenue

	2018	2017
Deferred revenues	1,313,467	1,471,363
Prepaid services to be provided (1)	301,621	388,301
Government grants (2)	63,731	89,036
Network swap (3)	11,449	20,191
Anticipated receipts	18,626	22,627
Deferred revenue for sale of towers (4)	897,112	951,208
Contractual liability (Note 2.f)	20,928	-
Current portion	(406,867)	(480,431)
Non-current portion	906,600	990,932

(1) This refers to the reloading of voice and data credits not yet used by customers involving prepaid system services, which are appropriated to income when customers actually avail themselves of these services.

(2) Refers to the release of funds under the credit facility from the BNDES Investment Sustainment Program (BNDES PSI). The total sum of the subsidies granted by the BNDES through December 31, 2018, was R\$203 million. This amount is being amortized according to the useful life of the asset being financed and appropriated to the "Other income (expenses), net" (Note 28).

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(3) Refers mainly to the transfer of onerous contracts and reciprocal fiber optic infrastructure (Note 11).

(4) Refers to amounts to be appropriated from sales of towers (Note 15).

23 Provision for legal and administrative proceedings

The Company and its subsidiary are parties to legal and administrative proceedings in the civil, labor, tax and regulatory spheres which arise in the normal course of their business.

The provision is set up at an amount deemed sufficient and adequate to cover losses and risks considered probable, based on an analysis by the Company's legal consultants and by Management. Situations where losses are considered probable or possible are subject to registration and disclosure, respectively, for their adjusted amounts, and those where losses are considered remote are not disclosed.

The updated provision set up for legal and administrative proceedings is made up as follows:

	2018	2017
Provision for legal and administrative proceedings	849,408	528,320

Civil (a)	111,301	132,422
Labor (b)	435,438	184,311
Tax (c)	271,214	180,643
Regulatory (d)	31,455	30,944

The changes in the provision for legal and administrative proceedings can be summarized as follows:

	Dec/2017	Additions, net of reversals	Payments	Monetary adjustment	Dec/2018
	528,320	551,191	(536,647)	306,544	849,408
Civil (a)	132,422	239,705	(324,803)	63,977	111,301
Labor (b)	184,311	225,864	(114,450)	139,713	435,438
Tax (c)	180,643	84,990	(96,346)	101,927	271,214
Regulatory (d)	30,944	632	(1,048)	927	31,455

The Company and its subsidiary are subject to various legal and administrative proceedings filed against

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them by consumers, suppliers, service providers, consumer protection agencies and public finance agencies, in connection with a number of issues that arise in the regular course of business of the entities. The main cases are summarized below:

a. Civil proceedings

a.1. Consumer lawsuits

The subsidiaries are parties to lawsuits that refer to some claims that have been filed by consumers at the legal and administrative levels. These claims, which amount to R\$86,039 (R\$88,636 as at December 31, 2017) basically refer to alleged incorrect collections, contract cancellation, service quality, deficiencies and failures in equipment delivery, and unjustified inclusion in credit protection services.

a.2. Consumer protection agencies

TIM is a party to court and administrative lawsuits filed by the Public Prosecutor's Office, Procon and other consumer protection agencies arising from consumer complaints that include: (i) alleged failure to provide network services; (ii) challenges related to the quality of client assistance; (iii) alleged violation of SAC Decree; (iv) alleged violation of agreements; (v) alleged false advertising; and (vi) discussion of the amounts charged by the Company to its customers related to loyalty fines in the case of handset theft. The amounts involved total R\$5,814 (R\$4,551 as at December 31, 2017).

a.3. Former trade partners

TIM is a defendant in lawsuits filed by former trade partners claiming, among others, amounts on the basis of alleged non-compliance with agreements. The amounts involved total R\$10,378 (R\$13,152 as at December 31, 2017).

a.4. Others

TIM is a defendant in other non-consumer lawsuits filed by different agents to challenge, among others: (i) the renewal of lease agreements; (ii) share subscription; (iii) indemnities; (iv) alleged non-compliance with agreements; and (v) collection suits. The amounts involved total R\$3,060 (R\$18,224 as at December 31, 2017).

a.5. Social, environmental and infrastructure

The subsidiaries are parties to lawsuits involving various agents challenging several licensing aspects, such as environmental licensing and structure licensing (installation/operation). The amounts involved total R\$239 (R\$3,157 as at December 31, 2017).

a.6 ANATEL

The subsidiaries are parties to lawsuits filed against ANATEL, challenging: (i) a debit related to the collection of 2% on revenue from value added services ("VAS") and interconnection; (ii) *pro rata* monetary restatement applied to the price proposal established in the call notice for use of 4G frequencies; and (iii) alleged non-compliance with service quality targets. The amounts involved are equivalent to R\$1,270 (no provision for such cases were established as at December 31, 2017).

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b. Labor proceedings

Below is a summary of the key labor proceedings claims with a likelihood of loss considered probable:

Refer to various labor claims filed by former employees in relation to issues such as salary differences, parity, payment of variable compensation/commission, legal additions, overtime and other provision set forth in the period preceding the privatization process, and also claims filed by former employees of service providers who, taking advantage of the labor legislation currently in force, require the Company and/or its subsidiary to be held liable for labor obligations not complied with by the service providers contracted.

Of the total number of 3,948 labor claims as at December 31, 2018 (1,845 as at December 31, 2017) filed against the Company and its subsidiary, most of them relate to claims involving former employees of service providers, followed by claims filed by the Company's own employees. The provision for these proceedings amounts to R\$426,570, monetarily restated (R\$172,467 as at December 31, 2017). During the fiscal year 2018, according to the opinion of the Company's legal counsel, the chances of loss of certain labor claims changed from possible loss to probable loss, with the corresponding provision being therefore set up.

A significant portion of this provision refers to organizational restructuring procedures, of which we highlight the closing of the activities of the call centers, as well as proceedings related to TIM's internal sites, which led to the termination of employees. As at December 31, 2018, the provision for these proceedings totaled R\$27,981, monetarily restated (R\$21,758 as at December 31, 2017).

c. Tax processes

	12/2018	12/2017
Federal taxes	82,033	33,907
State taxes	103,546	59,403
Municipal taxes	1,713	1,738
TIM S.A. proceedings (purchase price allocation)	83,922	85,595
	271,214	180,643

The total provision recorded is substantially composed of the following proceedings, and the amounts indicated are estimated using the indices established by the federal government for taxes in arrears, being linked to the variations in the SELIC rate:

Federal taxes

The provision is substantially composed of the following proceedings:

(i) The provision for TIM S.A. has been made for 47 cases challenging the taxes levied on CIDE (Intervention in the Economic Domain Contributions), CPMF (Contribution on Financial Activities), CSLL (Social Contribution) and IRRF (Withholding Tax) transactions, the voluntary reporting of the penalty regarding FUST payments and ancillary obligations. From these cases, the main amounts relate to court actions in which TIM intends to have the right not to pay the CPMF (a Federal contribution on financial movements) allegedly due to simultaneous purchase and sale transactions in foreign currency and changes to accountholders as a result of mergers, with updated provision amounts totaling R\$9,335 (R\$9,092 as at December 31, 2017), as well as the amount corresponding to the fine and interest on FUST contribution for the year 2009, which does not include the benefits of voluntary reporting, for which the amount provided and updated is R\$14,060 (R\$13,516 as at December 31, 2017).

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(ii) Additionally, the Company set up in this quarter a provision for a lawsuit seeking to collect social security contribution withheld at a rate of 11%, to which payments made by the Company to other legal entities as compensation for sundry activities should have supposedly been subject. The amount provisioned and updated is R\$36,685, with no corresponding figure in December 2017.

State taxes

The provision is substantially composed of the following proceedings:

(i) The provision for TIM S.A. covers 35 proceedings, of which the most important are: (i) the amounts for tax assessments questioning the usage of ICMS (Value Added Tax) debits, as well as the documentation supporting the credits appropriated by the Company, for which the updated amount provided is R\$42,628 (R\$14,610 as at December 31, 2017), (ii) amounts allegedly not subject to taxation, regarding the provision of telecommunication services, for which the updated amount is R\$4,829 (R\$4,605 as at December 31, 2017), as well as (iii) the cancellation of telecommunications services due to improper invoicing/subscription fraud, and alleged incorrect use of credit and duplication of ICMS, the updated amount of which is R\$24,646, having no corresponding amount as at December 2017.

Municipal taxes

These include the amounts involved in assessments questioning the withholding and payment of the ISS-source on services provided by third parties with no employment relationship, as well as the payment of own ISS regarding co-billing services.

TIM S.A PPA

Tax proceedings arising from the acquisition of TIM S.A and included in its purchase price allocation process, total R\$83,922 (R\$85,595 as at December 31, 2017).

d. Regulatory processes

ANATEL (*Agência Nacional de Telecomunicações*) has brought administrative proceedings against the Group for: (i) failure to meet certain quality service indicators; (ii) defaults on certain obligations assumed under the Instruments of Authorization; and (iii) non-compliance with the regulations of SMP and STFC, among others.

As of December 31, 2018, the amount classified as a probable risk related to Procedures to Verify Breaches of Obligations ("PADOs"), after monetary adjustments, amounted to R\$31,455 (R\$30,944 as at December 31, 2017).

e. Legal and administrative processes involving possible losses

Civil, labor, tax and regulatory actions have been filed against the Company and its subsidiary involving a risk of loss classified as possible by the Company's legal advisors and the Management. No provision has been set up for these legal and administrative proceedings, and no materially adverse effects are expected on the consolidated financial statements, as shown below:

	2018	2017
	18,734,644	16,757,282
Civil (e.1)	1,046,521	1,286,252
Labor and social security (e.2)	523,236	763,505
Tax (e.3)	16,530,061	14,528,617
Regulatory (e.4)	634,826	178,908

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The administrative and legal proceedings assessed as possible losses and monitored by Management are disclosed at their updated values.

The main actions where the risk of loss is classified as possible are described below:

e.1. Civil

	2018	2017
Actions filed by consumers (e.1.1)	405,635	453,231
ANATEL (e.1.2)	207,657	217,012
Consumer Protection Agencies (e.1.3)	84,231	158,620
Former trade partners (e.1.4)	173,213	182,843
Social and environmental, and infrastructure (e.1.5)	71,574	158,287
Other	104,211	116,259
	1,046,521	1,286,252

e.1.1. Actions filed by consumers

These actions refer particularly to alleged incorrect billing, contract cancellation, service quality, deficiencies and failures in equipment delivery, and unjustified inclusion in bad debtors' lists.

e.1.2. ANATEL

The subsidiaries are parties to lawsuits filed against ANATEL, for the following reasons: (i) debit regarding the collection of 2% on revenue obtained from VAS and interconnection; (ii) *pro rata* monetary restatement applied to the price proposal established in the call notice for the use of 4G frequencies; and (iii) alleged non-compliance with service quality targets.

e.1.3. Consumer Protection Agencies

TIM is a party to court and administrative lawsuits filed by the Public Prosecutor's Office, Procon and other consumer protection agencies arising from consumer-related complaints that include: (i) alleged failure to provide network services; (ii) alleged failure to deliver devices; (iii) alleged non-compliance with state legislation; (iv) contract model and alleged incorrect charging for VAS; (v) alleged violation of SAC Decrees; (vi) alleged violation of agreements; and (vii) blocking of data.

e.1.4. Former trade partners

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TIM is a defendant in actions filed by several former trade partners who are claiming, among other items, amounts arising from alleged non-compliance with agreements.

e.1.5. Social, environmental and infrastructure

The subsidiaries are parties to lawsuits involving different parties that challenge aspects related to: (1) environmental licensing and structure licensing (installation/operations), and (2) (i) electromagnetic radiation emitted by the telecom structures, (ii) renewal of leasing land agreements to install sites, (iii) eviction from land leased to install sites, and (iv) presentation of registration data, among others.

e.1.6 Others

TIM is a party to other lawsuits of an essentially non-consumer-related nature filed by various agents other than those described above, in which the discussions involve: (i) renewals of lease agreements, (ii) share subscription lawsuits, (iii) compensation lawsuits, (iv) alleged breach of contract, and (v) lawsuits involving charges.

e.2. Labor claims

There were 4,654 labor claims filed against the Company and its subsidiary as at December 31, 2018 (6,476 as at December 31, 2017) related to claims made by former employees and employees of service providers in the updated amount of R\$523,236 (R\$763,505 as at December 31, 2017).

A significant percentage of the existing proceedings relate to organizational restructuring processes, particularly the closure of the Client Relationship Centers (call centers), as well as processes relating to the internal sites of TIM, which resulted in the termination of employees. In addition to these proceedings, there are others filed by outsourced service providers alleging an employment relationship with TIM, in the total updated amount of R\$16,709 (R\$27,775 as at December 31, 2017).

The Company is a party to public civil actions filed by the Labor District Attorney's Office alleging irregular outsourcing practices and with collective moral damages due to outsourcing in the total updated amount of R\$19,706 (R\$60,711 as at December 31, 2017).

A group of actions have been filed in the State of Paraná, involving claims for damages in connection with contractual provisions, documented through a formal "stamp note" in the employees' work contract. According to an internal rule, TELEPAR undertook to supplement the retirement benefits of employees hired up until 1982. Prior to privatization, TELEPAR had proposed to implement this benefit by means of the payment of a certain amount in cash in the amount of R\$515 as a possible risk and R\$2,727 as probable risk (R\$3,210 updated as a possible risk and R\$5,654 as probable risk as at December 31, 2017).

It should also be pointed out that there is a group of labor claims, particularly in São Paulo and Rio de Janeiro, from former Gazeta Mercantil, Jornal do Brasil and JB Editora employees who have filed claims requesting the inclusion of Holdco as a defendant. Prior to the merger with TIM Participações, Holdco belonged to the Docas economic group, of which Gazeta Mercantil and Jornal do Brasil are part. There is also a group of labor lawsuits in which former employees of the companies mentioned above are also requesting the inclusion of TIM Participações.

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The remaining amounts relate to various labor claims lawsuits filed by the Company's own former employees and former employees of third parties.

e.2.1. Social security

TIM S.A. received a Debit Assessment Notice referring to alleged irregularity in the payment of social security contributions in connection with the payment of profit sharing in the updated amount of R\$538 (R\$4,995 at December 31, 2017, this reduction having occurred due to the reclassification of a proceeding carrying a remote risk on account of the progress thereof). TIM Celular was also assessed for social security contributions that were allegedly due in connection with hiring bonuses, non-adjusted bonuses, payments to self-employed persons and sales incentives in the updated amount of R\$9,693 (R\$9,868 as at December 31, 2017).

TIM S.A. received Tax Underpayment Assessments regarding alleged irregularity related to the payment of social security contributions levied on profit sharing; the retention of 11% on service agreements; failure to pay Management's fees and failure properly to fill out the FGTS- GFIP tax form, and an erroneous GFIP declaration in the updated amount of R\$1,430 (R\$43,756 as at December 31, 2017).

e.3. Tax

	12/2018	12/2017
Federal Taxes (e.3.1)	3,952,125	3,752,877
State Taxes (e.3.2)	8,904,916	7,407,881
Municipal Taxes (e.3.3)	693,616	658,783

FUST, FUNTTEL and EBC (e.3.4)	2,979,404	2,709,076
	16,530,061	14,528,617

The amounts are adjusted based on an estimate of the SELIC rate. The historical amount involved is equivalent to R\$11,662,216.

e.3.1. Federal taxes

Assessment against the TIM Group for federal taxes amounted to R\$3,952,125 as at December 31, 2018 (R\$3,752,877 as at December 31, 2017). Of this total, the following issues stand out:

- (i) Alleged errors in the use of tax credits due to a reverse merger, the amortization of goodwill paid on the acquisition of mobile phone companies, deduction of goodwill amortization expenses, exclusion of goodwill reversal, other effects and the disallowance of offsetting and estimated deductions paid, allegedly improper use of SUDENE benefits caused by a lack of formalization of these benefits in the Federal Revenue Department ("RFB") and failure to pay the estimated IRPJ and CSLL amounts. The amount involved is R\$2,543,851 (R\$2,552,068 as at December 31, 2017).
- (ii) Method of offsetting tax losses and negative bases. The amount involved is R\$198,175 (R\$192,417 as at December 31, 2017).
- (iii) Collection of CSLL on monetary variations for swap transactions, recorded on a cash basis. The amount involved is R\$64,537 (R\$62,312 as at December 31, 2017).
- (iv) Payment of IRRF on revenue from overseas residents, including those remitted for international roaming and payments to unidentified beneficiaries, as well as the collection of CIDE on royalties

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remitted overseas, including remittances for international roaming. The amount involved for the subsidiary is R\$296,589 (R\$297,900 as of December 31, 2017).

- (v) Charging of IRPJ, PIS/COFINS and CSLL debts for the non-approval or partial approval of offsetting carried out by the Company using credits from withholding tax on financial investments and negative IRPJ balance. The amount involved is R\$412,715 (R\$396,103 as at December 31, 2017).

e.3.2. State taxes

Assessment against TIM Group for state taxes amounting as at December 31, 2018 to R\$8,904,916 (R\$7,407,881 as at December 31, 2017). Of the total amount, the following issues stand out:

- (i) Failure to include unconditional discounts offered to customers in the ICMS calculation base, and a fine for alleged failure to comply with related ancillary obligations, including failure to submit register 60i of the SINTEGRA file. The amount involved is R\$1,344,288 (R\$1,244,936 as at December 31, 2017).
- (ii) Use of tax benefits under the Program for Promoting the Integrated and Sustainable Economic Development of the Federal District ("PRÓ-DF") granted by the tax authority itself, but subsequently declared unconstitutional and alleged incorrect crediting of ICMS on interstate purchases of goods with tax benefits granted in the state of origin. The amount involved is R\$1,110,827 (R\$1,055,667 as at December 31, 2017).
- (iii) Credit reversal and late use of credits for purchases of fixed assets. The amount involved for TIM S.A. is R\$767,142 (R\$804,604 as at December 31, 2017).
- (iv) ICMS credits booked and debits reversed, as well as the identification and supporting documentation for amounts and information passed to customer bills, such as tax rates and credit granted as prepayment of future recharges (special credit), as well as credits related to transactions involving tax substitution, exempt and non-taxable transactions.

As at December 31, 2018, the amount involved for the subsidiary was R\$3,340,448 (R\$1,827,284 as of December 31, 2017).

- (v) The use of credit to purchase electricity for the companies' production processes. The amount involved is R\$140,368 (R\$131,625 as at December 31, 2017).
- (vi) Liability for ICMS and FECOP (State Anti-Poverty Fund) on fixed asset purchases and other transactions, and on the provision of telecommunications services in specific cases determined by the law. The amount involved is R\$179,853 (R\$175,729 as at December 31, 2017).
- (vii) Alleged conflict between ancillary obligation data and the payment of the tax, and specific questioning regarding the fine charged due to non-compliance with ancillary obligations. The amount involved is R\$116,880 (R\$253,443 as at December 31, 2017).
- (viii) Alleged failure to pay ICMS arising from debts reversed regarding prepaid services, incorrect ICMS credits regarding outgoing goods allegedly benefiting from a reduction in the calculation base, as well as an alleged failure to include VAS of the ICMS calculation base. The amount involved is R\$192,074 (R\$149,425 as at December 31, 2017).

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- (ix) Credits booked for the return of cell phones on free lease. The amount involved is R\$177,128 (R\$185,526 as at December 31, 2017).
- (x) Collection of ICMS tax on subscription services and the alleged failure to include this in the ICMS calculation base due to its nature. The amount involved is R\$139,758 (R\$112,848 as at December 31, 2017).

e.3.3. Municipal taxes

The total assessment against the TIM Group for municipal taxes was R\$693,616 as at December 31, 2018 (R\$658,783 at December 31, 2017). Of this amount, the following issues stand out:

- a. Payment of ISS and of a punitive fine for failure to pay the alleged tax on various revenue accounts of the Company. The amount involved is R\$142,355 (R\$136,732 as at December 31, 2017).
- b. Collection of ISS on import of services. The amount involved is R\$283,620 (R\$269,547 as at December 31, 2017).
- c. Constitutionality of the collection of the TFF by municipal authorities in several locations. The amount involved is R\$118,114 (R\$107,519 as at December 31, 2017).

e.3.4. FUST and FUNTTEL

The amount assessed against TIM Group for contributions to FUST and FUNTTEL is R\$2,979,404 (R\$2,709,076 as at December 31, 2017). The principal discussion involves the

payment of the contributions to FUST and FUNTTEL (the Telecommunications Technical Development Fund) starting from the issue by ANATEL of Ruling No. 07/2005, relating primarily to the payment of the FUST and FUNTTEL contributions on interconnection revenue earned by telecommunications service providers, from the effective date of Law N°. 9998/2000.

e.4. Regulatory issues

ANATEL has filed administrative proceedings against the subsidiaries for: (i) not complying with certain quality indicators, (ii) defaulting on other obligations under Instruments of Authorization, and (iii) not complying with SMP and STFC regulations, among other items.

As at December 31, 2018, the amount stated for a Breach of Obligation procedures (locally PADOs), considering the monetary restatement that was considered possible loss was R\$634,826 (R\$178,908 as at December 31, 2017). The variations mainly resulted from the handling of the PADOs included in the Consent Decree - "TAC" negotiated with ANATEL and new revenue recorded in the year 2018.

On obtaining an extension of the authorization to use radio frequencies associated with SMP, the subsidiary TIM S.A. incurs contractual charges on net revenue from service plans sold under each authorization. However, ANATEL has included interconnection revenue in the calculation base for these charges since 2011, and revenue from VAS since 2012. In the Company's opinion, this revenue should not be included because it is not expressly stipulated in the original Instruments of authorization. Therefore, the charges received are being discussed at the administrative and/or legal levels.

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24 Shareholders' equity

a. Share capital

The capital is stated at the amount effectively raised from shareholders, net of the costs directly linked to the issuance process.

When a company within the Group purchases the Company's shares, intending to hold them as treasury shares, the amount paid, including any directly attributable additional costs, is deducted from the Company's shareholders' equity until the shares are cancelled or reissued. When these shares are reissued subsequently, any amount received, net of additional costs directly attributable to the transaction, is included in shareholders' equity. As at December 31, 2018, the Company held 784,317 Treasury shares (1,601,841 for 2017) with a view to fulfilling the stock option Plan (Note 25).

The Company is authorized to increase its capital upon a resolution by the Board of Directors, without amending the bylaws, up to the limit of 4,450,000,000 common shares.

The subscribed and paid up capital is represented as follows:

	2018	2017
Net value paid up	9,866,298	9,866,298
Value paid up	9,913,415	9,913,415

(-) Funding costs	(47,117)	(47,117)
Number of common shares	2,421,032,479	2,421,032,479

b. Capital reserves

The use of capital reserves is in accordance with the provisions of Article 200 of Law No. 6404/76, which refers to corporate entities. These reserves consist of:

	2018	2017
	412,091	416,161
Special goodwill reserve	380,560	380,560
Stock options	31,531	35,601

b.1 Special goodwill reserve

The special goodwill reserve arose from the following transactions:

(i) Takeover of the former subsidiaries TIM Sul and TIM NE - acquisition of minority shares

In 2005, the Company acquired all the shares held by the minority shareholders of TIM Sul S.A. and TIM Nordeste Telecomunicações S.A. This acquisition took place by issuing new shares of TIM Participações S.A., converting those companies into full subsidiaries. At that time, this transaction was recorded at the book value of the shares, no goodwill being recorded arising from the difference between the market value and the shares negotiated.

When first adopting IFRS, the Company availed itself of the exemption that allows a subsidiary, when it adopts international accounting practices subsequent to its parent company having adopted IFRS, to consider the balances previously reported to the parent company for consolidation purposes. In the balance sheet of the transition to IFRS, the Company recorded the acquisition price based on the market value of the shares of TIM Participações S.A. at that time, recording goodwill amounting to R\$157,556.

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(ii) Acquisition of the shares of Holdco - purchase of TIM S.A (Intelig)

As at December 30, 2009, the Special General Meeting of TIM Participações approved the takeover of Holdco, a company that held 100% of the equity of TIM S.A, by TIM Participações. As a result of this transaction, the Company issued 127,288,023 shares.

Based on the former Brazilian accounting principles ("BR GAAP"), the acquisition was recorded at the net book value of the assets acquired on the base date November 30, 2009.

When IFRS was first adopted, the acquisition was recorded on the base date of December 31, 2009, taking into account the market value of the common and preferred shares of TIM Participações as at December 30, 2009, amounting to R\$739,729. The difference between this amount and the book value recorded under the former BR GAAP (R\$516,725) created goodwill on capital reserves of R\$223,004.

b.2 Stock options

The balances recorded in these items represent the expenses of the Company and its subsidiary for the share options granted to their employees (Note 25).

For the fiscal years 2018 and 2017, the Company sold 1,194,576 and 1,548,732 common shares, respectively, to the beneficiaries of the share option plan (Note 25). These shares were held in treasury by the Company from the date of exercise of the options, at the average book value of R\$ 10.34 and R\$ 8.69, respectively. Additionally, through the Share Repurchase Program rolled out in October 2017, the Company purchased in 2018, 377,052 (2,354,685 for 2017) shares at the price of R\$11.64, equivalent to R\$4,389 (R\$27,734 for 2017). As a result, the net effect on the repurchase program for treasury shares was R\$7,964 (R\$13,118 for 2017).

c. Profit reserves

c.1 Legal reserve

This refers to 5% of the income for every year ended December 31, until the legal reserve equals 20% of the capital stock, excluding, as from 2018, the balance set aside for the tax incentive reserve. Also, the Company is authorized to cease setting up a legal reserve when, together with the capital reserves, it exceeds 30% of the capital stock.

This reserve can be used only for capital increases or the offsetting of accumulated losses.

c.2 Statutory reserve for expansion

This reserve is set up based on paragraph 2, Article 46 of the Company's bylaws and is intended for the expansion of the corporate business.

The balance of income that is not compulsorily allocated to other reserves and that is not allocated for the payment of dividends, is allocated to this reserve, which may not exceed 80% of the capital. Once this limit is reached, it is incumbent upon the shareholders' meeting to decide on the balance, either distributing this to shareholders or increasing the capital.

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c.3 Tax benefit reserve

The subsidiary enjoys tax benefits that provide for restrictions on the distribution of profits by this subsidiary. According to the legislation establishing these tax benefits, the amount of taxes waived as a result of exemptions and reductions in the tax charge may not be distributed to shareholders and must be registered as a tax incentive reserve for the legal entity. This reserve should only be used for offsetting the losses or capital increases. The accumulated amount of benefits enjoyed by the subsidiary is equivalent to R\$1,417,858 on December 31, 2018 and R\$1,271,404 on December 31, 2017.

This tax benefit basically corresponds to a reduction in the IRPJ on income from exploration, recorded by the units entitled to this benefit. The subsidiary operates in the area of the former Superintendence for Development of the Amazon ("SUDENE/SUDAM"), and the tax benefit reports are granted by the state, for a period of ten years, subject to extension.

The Company and its subsidiary analyzed the accounting best practices and the corporate laws, resulting in the reclassification of the Tax Incentives line from "Capital Reserve" to "Profit Reserve" under shareholders' equity, in the amount of R\$1,271,404 and R\$ 1,158,910 for 2017 and 2016, respectively.

d. Dividends

Dividends are calculated in accordance with the bylaws and Brazilian Corporate Legislation.

As stated in the most recent bylaws approved on April 14, 2016, the Company must distribute a mandatory dividend for each business year ended December 31, provided that funds are available for distribution, equivalent to 25% of the revised profit.

As provided for in the Company's bylaws, dividends not claimed within three years will be reversed to the Company.

As at December 31, 2018 and 2017, dividends and interest on equity were calculated as shown below:

	2018	2017
Net income for the year	2,545,101	1,234,507
(-) Tax incentives not to be distributed	(146,455)	(112,493)
(-) Legal reserve constitution	(119,932)	(61,725)
Revised profit	2,278,714	1,060,289
Minimum dividends calculated considering 25% of the revised profit	569,679	265,072
Breakdown of dividends payable and interest on equity:		
Interest on shareholders' equity	849,994	189,991
Dividends		103,325
Total dividends and interest on shareholders' equity distributed and proposed	849,994	293,316
IRRF on interest on shareholders' equity	(125,757)	(28,244)
Total dividends and interest on shareholders' equity, net	724,237	265,072
Dividends per share (<i>Reais</i> per share), net of IRRF	0.30	0.11

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The balance of dividends and interest on shareholders' equity payable on December 31, 2018 includes amounts not settled in previous years, in the amount of R\$47,111 (R\$40,266 as at December 31, 2017), in addition to the still unpaid return on equity allocated and calculated for 2018 in the amount of R\$322,994.

Interest on shareholders' equity paid and/or payable is recorded against financial expenses which, for the purposes of presentation of the consolidated financial statements, are reclassified and disclosed in the allocation of net income for the year/period, in changes in shareholders' equity. Interest on shareholders' equity received and/or receivable is recorded against financial revenue, with an impact on the equity accounting income. For disclosure purposes, the impacts on income are eliminated, and a reduction is recorded in the investment balance.

Dividends not claimed – As provided for in the Brazilian Corporate Law, dividends and interest on shareholders' equity that are declared but not claimed by shareholders for a period of three years are reversed to the shareholders' equity according to the statute of limitations.

Regarding the statement of cash flow, interest on shareholders' equity and dividends paid to shareholders were classified as "Financing Activities".

25 Long-term incentive plan

2011-2013 Plan, 2014-2016 Plan and 2018-2020 Plan

At the annual meeting on August 5, 2011, April 10, 2014 and April 19, 2018, the shareholders of TIM Participações S.A. approved the long-term incentive plans, respectively the "2011-2013 Plan", the "2014-2016 Plan" and the "2018-2020 Plan" for the senior management and key executives of the Company and its subsidiary.

The 2011-2013 and 2014-2016 Plans involve granting options, while the 2018-2020 Plan provides for the granting of shares.

The exercise of options under the 2011-2013 Plan depends on the achievement of specific performance targets, while the exercise of options of the 2014-2016 Plan is not subject to this condition. The Exercise Price is calculated with an upward or downward adjustment to the Base Share Price, according to share performance, as provided for in each Plan. The 2018-2020 Plan, in turn, proposes compensating the participants by issuing shares in the Company, subject to certain time and/or performance conditions (attainment of specific targets).

Share options of the 2011-2013 and the 2014-2016 Plans are effective for six years, and TIM Participações has no legal or informal obligation to repurchase or settle the options in cash. In the case of the 2018-2020 Plan, the effectiveness period is the same as the vesting period of three years. The 2018-2020 Plan, in turn, besides allowing for the transfer of shares, also provides for the possibility of making payments to the participants of the equivalent cash value.

The total amount of the expense is recognized during the vesting period: that is, the period during which specific vesting conditions must be met. On the date of each balance sheet, the Group reviews its estimates for the number of options that will vest, considering vesting conditions not related to the market and time with the company.

The social contribution taxes payable in connection with the granting of stock options are considered an integral part of the grant, and the collection is treated as a cash-settled transaction.

It should also be taken into account that in 2017 there were no new grants, only the calculations of the vestings from past grants.

The variations in the quantity of shares/options are presented below:

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Date of grant	Share options granted	Maturity date	Exercise price	Balance at the beginning of the period	Granted in the period	Exercised in the period	Forfeited in the period	Falling due in the period
2018								
2018-2020 Plan – 1 st Grant	849,932	May/20	14.41		- 849,932		(383,418)	-
2014-2016 Plan – 3 rd Grant	3,922,204	Nov/22	8.10	2,684,284		(510,884)	(1,277,878)	-
2014-2016 Plan – 2 nd Grant	3,355,229	Oct/21	8.45	1,240,740		(656,268)	(291,949)	-
2014-2016 Plan – 1 st Grant	1,687,686	Sep/20	13.42	658,720		(27,424)	(99,324)	-
2011-2013 Plan – 3 rd Grant	3,072,418	Jul/19	8.13	694,936			(151,353)	-
2011-2013 Plan – 2 nd Grant	2,661,752	Sep/18	8.96	194,756				(194,756)
2011-2013 Plan – 1 st Grant	2,833,595	Aug/17	8.84		-			-
Total	18,382,816			5,473,436	849,932	(1,194,576)	(2,203,922)	(194,756)
Average weighted price for the period			10.26					

Below are the significant data included in the model:

Date of grant**Volatility**

	Weighted average base price of shares during the vesting period of the grant		Expected useful life of the option	Annual interest rate without risk
2011 Grant	R\$8.84	51.73% p.a	6 years	11.94% p.a
2012 Grant	R\$8.96	50.46% p.a	6 years	8.89% p.a
2013 Grant	R\$8.13	48.45% p.a	6 years	10.66% p.a
2014 Grant	R\$13.42	44.60% p.a	6 years	10.66% p.a
2015 Grant	R\$8.45	35.50% p.a	6 years	16.10% p.a
2016 Grant	R\$8.10	36.70% p.a	6 years	11.73% p.a
2018 Grant	R\$14.41	NA	3 years	NA

The Base Share Price was calculated using the weighted prices of the shares of TIM Participações, during the following periods:

- **2011-2013 Plan – 1st Grant** - Volume traded and the trading price of the shares in TIM Participações in the 30 day period prior to July 20, 2011 (the date when the Board of Directors of TIM Participações approved the benefit).
- **2011-2013 Plan– 2nd Grant** - Volume traded and the trading price of TIM Participações shares during the period July 1, 2012 to August 31, 2012.
- **2011-2013 Plan– 3rd Grant** - Volume traded and the trading price of TIM Participações shares during the 30 day period preceding July 20, 2013.
- **2014-2016 Plan– 1st Grant** - Volume traded and the trading price of TIM Participações shares during the 30 day period preceding the date determined by the Board of Directors of TIM Participações (September 29, 2014).

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- **2014-2016 Plan– 2nd Grant** - Volume traded and the trading price of TIM Participações shares during the 30 day period preceding the date determined by the Board of Directors of TIM Participações (September 29, 2015).
- **2014-2016 Plan– 3rd Grant** - Volume traded and the trading price of TIM Participações shares during the 30 day period preceding the date determined by the Board of Directors (September 29, 2016).
- **2018-2020 Plan – 1st Grant** - Volume traded and the trading price of TIM Participações shares during the period from March 1, 2018 to March 31, 2018.

The Group recognizes the impact of review of its initial estimates, if any, in the statement of income, with a contra-entry in shareholders' equity. As at December 31, 2018 the expenses related to said long-term benefit plans totaled R\$4,291 (R\$12,789 as at December 31, 2017). However, due to the contractual termination of certain executives during the 2018 fiscal year, their respective benefits were cancelled, generating a reduction in the expenses in the amount of R\$ 4,775.

26 Revenue

Revenue from services rendered

The principal service revenue derives from monthly subscription, the provision of separate voice, SMS and data services, and user packages combining these services, roaming charges and interconnection revenue. The revenue is recognized as the services are used, net of sales taxes and discounts granted on services. This revenue is recognized only when the amount of services rendered can be estimated reliably.

The revenue is recognized monthly based on invoicing, and billable revenue between the billing date and the end of the month (unbilled) are identified, processed and recognized in the month in which the service was rendered. Calculations of unbilled revenue from the previous month are reversed out and unbilled amounts are calculated at each month-end, considering the revenue billed in the previous month.

Interconnection traffic and roaming revenue are recorded separately, without offsetting the amounts owed to other telecom operators (the latter are accounted for as operating costs).

The minutes not used by customers and/or reload credits in the possession of commercial partners regarding the prepaid service system are recorded as deferred revenue and allocated to income when these services are actually used by customers.

Revenue from product sales

Revenue from product sales (telephones, mini-modems, tablets and other equipment) are recognized when the significant risks and benefits of the ownership of such products are transferred to the buyer.

Agreements closed with customers combining services and products

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The Company offers loyal customers commercial packages combining cell phone devices and fixed or mobile telephony services, giving discounts on the devices and/or on services. In these cases, individual agreements are identified, performance obligations and transaction prices, allocating the total transaction price according to the individual selling price of each obligation. Revenue from services and products is recognized when each of the performance obligations provided for in the agreement with the customer is met, that is, when the customer holds control over the asset.

For further details about the application of the standard IFRS, see Note 2.f.

	2018	2017	2016
Net operating revenue	16,981,329	16,233,959	15,617,413
Gross operating revenue	24,232,404	22,611,074	22,745,589
Service revenue	23,065,648	21,433,515	21,367,818
Service revenue – Mobile	21,531,779	20,147,585	20,188,962
Service revenue - Landline	1,533,869	1,285,930	1,178,856
Goods sold	1,166,756	1,177,559	1,377,771
Deductions from gross revenue	(7,251,075)	(6,377,115)	(7,128,176)
Taxes	(5,163,797)	(5,027,406)	(5,694,886)
Discounts given	(2,073,892)	(1,329,600)	(1,394,223)
Returns and other	(13,386)	(20,109)	(39,067)

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27 Operating costs and expenses

	2018				2017		
	Cost of services provided and goods sold (*)	Selling expenses	General and administrative expenses	Total	Cost of services provided and goods sold (*)	Selling expenses	General administrative expenses
	(7,701,418)	(4,970,780)	(1,608,319)	(14,280,517)	(8,002,077)	(4,575,177)	(1,424,000)
Personnel	(36,514)	(637,177)	(357,878)	(1,031,569)	(48,802)	(602,578)	(305,000)
Third-party services	(518,762)	(2,169,624)	(451,990)	(3,140,376)	(544,036)	(2,049,994)	(429,000)
Interconnection and means of connection	(2,513,176)			(2,513,176)	(2,632,593)	-	
Depreciation and amortization	(3,119,954)	(162,804)	(671,562)	(3,954,320)	(3,280,524)	(162,020)	(571,000)
Taxes, fees and contributions	(31,754)	(866,197)	(18,333)	(916,284)	(36,625)	(919,018)	(111,000)
Rent and insurance	(591,226)	(146,877)	(67,387)	(805,490)	(609,595)	(92,363)	(62,000)
Cost of goods sold	(883,912)			(883,912)	(846,839)	-	
Publicity and advertising		(421,588)		(421,588)	-	(410,982)	
Losses on doubtful		(544,881)		(544,881)	-	(316,387)	

accounts							
Other	(6,120)	(21,632)	(41,169)	(68,921)	(3,063)	(21,835)	(43,967)

2016

	Cost of services provided and goods sold (*)	Selling expenses	General and administrative expenses	Total
	(7,966,487)	(4,719,029)	(1,258,722)	(13,944,238)
Personnel	(59,026)	(673,571)	(272,699)	(1,005,296)
Third-party services	(506,356)	(1,965,329)	(433,396)	(2,905,081)
Interconnection and means of connection	(2,676,813)	-	-	(2,676,813)
Depreciation and amortization	(3,157,720)	(181,916)	(445,536)	(3,785,172)
Taxes, fees and contributions	(33,627)	(1,047,416)	(13,474)	(1,094,517)
Rent and insurance	(551,020)	(101,731)	(72,276)	(725,027)
	(975,959)	-	-	(975,959)
Cost of goods sold				
Publicity and advertising	-	(438,837)	-	(438,837)
	-	(266,442)	-	(266,442)
Losses on doubtful accounts				
Other	(5,966)	(43,787)	(21,341)	(71,094)

The Company and its subsidiary analyzed the accounting best practice applicable to their activities, resulting in the following reclassifications with a view to keeping the comparability of the information disclosed. Reclassification of the amortization of authorization from the caption "General and administrative expenses" to "Costs of services provided," in the amount of R\$347,884 for the fiscal year ended December 31, 2018 (R\$261,927 and R\$ 273,081 for the fiscal year ended December 31, 2017 and 2016).

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The Company and its subsidiary contribute to public and private pension insurance plans in a mandatory, contractual or voluntary manner during the time when employees are working at the Company and its subsidiary. These plans do not originate any additional obligation for the Company. When an employee leaves the Company or its subsidiary during the period required for entitlement to receive the contributions made by the sponsors, the amounts to which the employee ceased to be entitled, and that may represent a reduction in future contributions of the Company and its subsidiary to active employees, or a refund in cash of these amounts, are recorded in assets.

28 Other income (expenses), net

	2018	2017	2016
Income			
Subsidy income, net	25,305	28,722	28,134
Fines on telecommunications services	44,411	41,699	39,639
Revenue from disposal of assets	1,708	2,865	57,563
Other income (i)	282,041	171,273	181,234
	353,465	244,559	306,570
Expenses			
FUST/FUNTTEL (ii)	(143,167)	(140,878)	(163,955)
Taxes, fees and contributions	(4,092)	(4,466)	(2,980)
Provision for legal and administrative proceedings, net of reversal	(452,463)	(366,476)	(352,154)
Expenses involving the disposal of assets	(4,424)	(6,618)	(14,473)
Other expenses	(32,608)	(24,831)	(21,987)
	(636,754)	(543,269)	(555,549)
Other revenues (expenses), net	(283,289)	(298,710)	(248,979)

(i) The variation in the period refers to credits arising from a lawsuit filed by TIM Nordeste S.A. (ultimately merged into TIM S.A.) with a final and unappealable decision in favor of the Company at Higher Courts in 2018, which challenged the exclusion of the ICMS from the PIS and COFINS tax bases for the period from 2002 through 2009 (Note 9).

In November 2018, due to said final decision, the Company recorded the amounts of R\$159 million as principal and R\$194 million as monetary adjustment.

(ii) Expenses incurred with contributions on several telecommunications revenue due to ANATEL, according to the legislation in force.

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29 Financial income

	2018	2017	2016
Financial income	412,733	512,565	750,450
Interest on financial investments	119,548	369,517	477,667
Interest received from clients	36,793	38,227	43,340
Swap interest	17,001	32,300	129,179
Interest on leasing	25,664	22,709	25,756
Monetary adjustments	207,191	39,694	61,628
Other income	6,536	10,118	12,880

30 Financial expenses

	2018	2017	2016
Financial expenses	(951,439)	(1,009,653)	(1,156,485)
Interest on borrowing and financing	(96,682)	(211,108)	(199,077)
Interest paid to suppliers	(10,906)	(998)	(21,474)
Interest on taxes and fees	(15,409)	(5,712)	(28,944)
Swap interest	(32,424)	(85,362)	(230,642)
Interest on leasing	(266,328)	(257,305)	(246,280)
Monetary adjustment	(340,175)	(278,272)	(269,031)
Discounts granted	(38,858)	(52,683)	(61,082)
Other expenses	(150,657)	(118,213)	(99,955)

The exchange variation for the period relates to borrowing and financing and suppliers in foreign currency. Derivative transactions were used to reduce their effects (Note 36).

31 Foreign exchange variations, net

	2018	2017	2016
Revenues			
Borrowing	1,409	287,777	1,162,987
Suppliers	6,844	4,124	12,238
Swap	75,340	130,971	512,824
Other	13,937	7,146	10,996
	97,530	430,018	1,699,045
Expenses			
Borrowing	(75,298)	(271,286)	(714,773)
Suppliers	(11,925)	(6,819)	(8,213)
Swap	(1,409)	(147,356)	(960,635)
Other	(7,525)	(5,305)	(20,269)
	(96,157)	(430,766)	(1,703,890)
Exchange variations, net	1,373	(748)	(4,845)

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32 Income tax and social contribution

	2018	2017	2016
Current income and social contribution taxes			
Income tax for the fiscal year	(253,120)	(203,932)	(309,695)
Social contribution for the fiscal year	(92,502)	(77,148)	(110,997)
Tax incentive – SUDENE/SUDAM (*)	146,454	112,493	118,250
	(199,168)	(168,587)	(302,442)
Deferred income tax and social contribution			
Deferred income tax	651,632	(23,976)	29,482
Deferred social contribution	217,501	(8,631)	9,947
	869,133	(32,607)	39,429
Provision for income tax and social contribution contingencies			
	(5,054)	185	124
	864,079	(32,422)	39,553
	664,911	(201,009)	(262,889)

The reconciliation of income tax and social contribution expenses calculated at the applicable tax rates plus the amounts reflected in the statement of income is set forth below:

	2018	2017	2016
Income before income tax and social contribution			
	1,880,190	1,435,516	1,013,316
Combined tax rate			
	34%	34%	34%
Combined tax rate on income tax and social contribution	(639,265)	(488,075)	

(344,527)

(Additions)/exclusions:

Unrecognized/recognized tax losses and temporary differences

920,745 68,716 6,611

Permanent additions and exclusions:

Non-deductible expenses for tax purposes

(12,040) (6,638) (18,634)

Financial lease impact

(36,046) (35,872) (30,700)

Tax benefit on the interest on equity allocated

288,998 64,597 -

SUDENE/SUDAM tax incentive (*)

146,454 112,498 118,250

Use of tax losses not previously recognized

11,176 -

Other amounts

(3,935) 72,589 6,111

1,304,176 287,066 81,638

Income tax and social contribution recorded in income for the fiscal year

664,911 (201,009) (262,889)

Actual rate

(35.36%) 14.00% 25.94%

(*) As mentioned in Note 24 c.3, for investment subsidies not to be considered within the taxable income, they must be recorded as tax incentive reserves, to be used only to offset losses or increase capital. The subsidiary TIM S.A. has tax benefits which comply with these rules.

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33 Earnings per share

(a) Basic

Basic earnings per share are calculated by dividing income attributable to shareholders of the Company by the weighted average number of shares issued during the period.

	2018	2017	2016
Income attributable to shareholders of the Company	2,545,101	1,234,507	750,427
Weighted average number of common shares issued (thousands)	2,420,172	2,420,016	2,420,237
Basic earnings per share (expressed in R\$),	1.05	0.51	0.31

(b) Diluted

Diluted earnings per share are calculated by adjusting the weighted average number of shares outstanding to assume the conversion of all dilutive potential shares.

2018 2017 2016

Income attributable to shareholders of the Company	2,545,101	1,234,507	750,427
Weighted average number of common shares issued (thousands)	2,421,075	2,421,072	2,420,241
Diluted earnings per share (expressed in R\$)	1.05	0.51	0.31

The calculation of the diluted earnings per share considered 903 thousand shares (1,056 and 4,53 thousand shares in 2017 and 2016, respectively) related to the granting of Plan 2011-2013, and granting of the 2014-2016 Plan, as mentioned in Note 25.

34 Balances and transactions with related parties

The consolidated balances of transactions with companies of the Telecom Italia Group are as follows:

	Assets	
	2018	2017
Telecom Italia Sparkle (2)	2,877	1,416
TI Sparkle (5)	804	1,544
TIM Brasil (7)	13,993	13,619
Gruppo Havas (9)	75,600	115,840
Other	1,092	709
Total	94,366	133,128

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	Liabilities	
	2018	2017
Telecom Italia S.p.A. (3)	89,433	35,288
Telecom Italia Sparkle (2)	11,895	10,686
TI Sparkle (5)	4,174	9,223
TIM Brasil	6,044	4,903
Vivendi Group (8)	4,745	6,430
Gruppo Havas (9)	62,686	29,008
Other	107	107
Total	179,084	95,645

	Revenues		
	2018	2017	2016
Telecom Italia S.p.A. (3)	858	665	3,090
Telecom Argentina Group (1)	-	-	8,232
Telecom Italia Sparkle (2)	5,809	5,281	4,694
TI Sparkle (5)	904	692	1,627
Total	7,571	6,638	17,643

	Costs/Expenses		
	2018	2017	2016
Telecom Italia S.p.A. (3)	62,976	8,440	6,801
Telecom Italia Sparkle (2)	30,123	26,775	39,913
Telecom Argentina Group (1)			713
TI Sparkle (5)	18,035	30,734	52,938
Generali (6)		3,254	194
Vivendi Group (8)	9,439	16,361	8,075
Gruppo Havas (9)	301,752	127,730	1,834
Italtel (4)		3,102	
Total	422,325	216,396	110,468

(1) These amounts refer to roaming, value-added services ("VAS"), international voice data – wholesale, among others. The "Telecom Argentina Group" consists of the companies Telecom

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Personal, Telecom Argentina and Nucleo. On March 8, 2016, Telecom Italia concluded the sale of its 100% interest in Telecom Argentina Group.

(2) These amounts refer to roaming, VAS, assignment of means and international voice data - wholesale.

(3) These amounts refer to international roaming, technical post-sales assistance and VAS.

(4) The amounts refer to the development and maintenance of software used for invoicing for telecommunications services.

(5) The amounts refer to the leasing of links and EILD, lease of means (submarine cables) and signaling services.

(6) The amounts refer to insurance coverage taken out for operating risks, civil liability and health insurance, among others.

(7) The amounts refer mainly to judicial deposits related to labor proceedings.

(8) The amounts refer to VAS.

(9) The amounts refer to publicity services.

The Company engages in social investment actions that include donations, programs developed by TIM Institute and sponsorships. In 2018, the Company invested R\$4,637 million out of its own funds in social benefits.

The balance sheet account balances are recorded in the following groups: trade accounts receivable, prepaid expenses, suppliers and other current assets and liabilities.

35 Management remuneration

Key Management personnel includes the statutory officers and the Board of Directors. The compensation of key Management personnel for services rendered is shown below:

	2018	2017
Salaries and other short-term benefits	28,020	21,757
Share-based payments	7,883	6,791
	35,904	28,548

36 Financial instruments and risk management

The financial instruments registered by the Company and its subsidiary include derivatives, which are

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financial liabilities measured at fair value through profit or loss. At each balance sheet date they are measured at their fair value. Interest, monetary adjustments, exchange variations and variations arising from measurement at fair value, where applicable, are recognized to income as they are incurred, under financial income or expenses.

Derivatives are initially recognized at fair value as at the date of the derivative agreement and subsequently revised to fair value. The method used to recognize any gain or loss depends on whether or not the derivative is assigned as a hedge instrument in cases where hedge accounting is adopted.

Through its subsidiary, the Company performs non-speculative derivative transactions, to: i) reduce the exchange variation risks, and ii) manage exposure to the interest risks involved. The Company's derivative financial transactions consist specifically of swap contracts and US Dollar stock options intended to reduce foreign exchange exposure risks on business contracts.

The Company's financial instruments are presented, through its subsidiary, in compliance with IFRS 9.

The major risk factors to which the Company and its subsidiary are exposed are as follows:

(i) Exchange variation risks

Exchange variation risks refer to the possibility of the subsidiary incurring: i) losses on unfavorable exchange rate fluctuations, which would increase the outstanding balances of

borrowing and financing taken in the market along with the related costs expenses, or ii) an increase in the cost of commercial agreements affected by exchange variations. In order to reduce this kind of risk, the subsidiary enter into swap contracts with financial institutions for the purpose of avoiding the impact of foreign exchange fluctuations on the financial results, and trade agreements containing sections that provide for foreign exchange bands with the purpose of partially reducing exchange rate risks, or US Dollar stock options intended to reduce foreign exchange exposure risks in business contracts.

As at December 31, 2018, the borrowing and financing of the subsidiary indexed to foreign currency were fully hedged by swap contracts in terms of time and amount. Any gains or losses arising from these swap contracts are recorded in the results of the subsidiary.

Besides the risks mentioned above, no other significant financial assets and liabilities are indexed to foreign currencies.

(ii) Interest rate risks

Interest rate risks relate to:

- The possibility of variations in the fair value of TJLP-indexed financing taken by the subsidiary, when these rates are not proportional to the CDI rate. As at December 31, 2018, the subsidiary had no swap transactions linked to the TJLP.

- The possibility of unfavorable changes in interest rates would result in higher finance costs for the subsidiary due to the indebtedness and the obligations assumed by the subsidiary under the swap contracts indexed to floating interest rates (CDI percentage). However, as at December 31, 2018, the subsidiary's financial funds were invested in CDIs and this considerably reduces this risk.

(iii) Credit risk inherent to providing services

The risk involves the possibility of the subsidiary factoring in losses arising from the inability of subscribers to pay the invoiced amounts. To keep this risk to a minimum, the subsidiary undertakes preventive credit analyses of all orders placed by the sales areas while monitoring the accounts receivable from subscribers, blocking their ability to use the services, among other actions, in the event that the customers do not pay their debts. There were no customers contributing more than 10% of the net accounts receivable as at December 31, 2018 and December 31, 2017 or revenue from services rendered.

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(iv) Credit risk inherent to sales of handsets and prepaid phone cards

The policy of the Group regarding the sale of handsets and the distribution of prepaid phone cards is directly related to the levels of credit risk accepted during the normal course of business. The selection of partners, the diversification of the accounts receivable portfolio, monitoring loan conditions, positions and order limits established for the traders and the constitution of real guarantees are among the procedures adopted by the subsidiaries to reduce possible problems in collecting from their commercial partners. The Company had one customer that accounts for 10.5% of net trade accounts receivable and one customer who contributed 10.1% of the net receivables from the sale of goods as at December 31, 2018.

(v) Liquidity risk

- Liquidity risk arises from the need for cash to meet the Company's obligations. The Company structures the maturity dates of its non-derivative financial instruments and of its respective derivative financial instruments so as not to affect liquidity.

- The Company's liquidity and cash flow management is performed on a daily basis in order to ensure that the operating cash generation and prior funding, whenever necessary, are sufficient to maintain its schedule of operational and financial commitments.

- All financial investments of the Company have daily liquidity, and Management may, in specific cases: i) review the dividend payment policy, ii) issue new shares, and/or iii) sell assets in order to improve liquidity.

(vi) Financial credit risk

The cash flow estimate is made and aggregated by the finance and treasury department of the Company. This department monitors the continuous liquidity requirements estimate to ensure that the Company has sufficient cash to meet its operating needs. This estimate takes into account investment plans, debt financing, compliance with contractual clauses, compliance with internal goals and, if applicable, compliance with regulatory, external or legal requirements.

This risk relates to the possibility of the Company and its subsidiary incurring losses due to difficulties in realizing their short-term investments and swap contracts due to bankruptcy of the counterparties. The subsidiary minimizes the risk associated with these financial instruments by operating only with sound financial institutions, and adopting policies that establish maximum risk concentration levels per institution.

Fair value of derivative financial instruments

The consolidated derivative financial instruments are shown as follows:

	2018			2017		
	Assets	Liabilities	Net	Assets	Liabilities	Net
Transactions involving derivatives	81,408	(11,618)	69,790	80,790	(32,463)	48,327
Current portion	50,769	(2,373)	48,396	53,875	(14,044)	39,831
Non-current portion	30,639	(9,245)	21,394	26,915	(18,419)	8,496

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The consolidated financial derivative instruments with long-term maturities as at December 31, 2018 were as follows:

	Assets	Liabilities
2020	7,109	(1,541)
2021	6,282	(1,541)
2022 onwards	17,248	(6,163)
	30,639	(9,245)

In August 2018, the Company decided to purchase US\$100 million in US Dollar call options in order to reduce the effects of foreign exchange variations on business contracts. The premium then paid amounted to R\$11.7 million, as shown in the table above, together with the existing swap transactions.

Non-derivative financial liabilities mainly represent suppliers, dividends payable and other obligations maturing in the next 12 months, except for borrowing and financing and financial leases, whose nominal payment flows are disclosed in Notes 19 and 15.

Consolidated financial assets and liabilities valued at fair value:

	2018		
		Level 1	Level 2
		Total	
Total assets		784,841	81,408
Financial assets valued at fair value		784,841	81,408

Derivatives used for hedging purposes	-	81,408	81,408
Securities	784,841	-	784,841
Total liabilities	-	11,618	11,618
Financial liabilities valued at fair value through profit or loss	-	11,618	11,618
Derivatives used for hedging purposes	-	11,618	11,618

2017

	Level 1	Level 2	Total
Total assets	765,614	80,790	846,404
Financial assets valued at fair value	765,614	80,790	846,404
Derivatives used for hedging purposes	-	80,790	80,790
Securities	765,614	-	765,614
Total liabilities		-32,463	32,463
Financial liabilities valued at fair value through profit or loss		-32,463	32,463
Derivatives used for hedging purposes		-32,463	32,463

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The fair value of financial instruments traded on active markets is based on quoted market prices as at the balance sheet date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. These instruments are included in Level 1. The instruments included in Level 1 mainly comprise investments in CDBs and Repurchases ("Repos") classified as trading securities.

The fair value of financial instruments that are not traded on an active market (for example, over-the-counter derivatives) is determined using valuation techniques. These valuation techniques maximize the use of observable market data when available, and rely to the minimum extent possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3.

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or financial institutions quotes or dealer quotes for similar instruments.
- The fair value of interest rate swaps is calculated as the present value of the estimated future cash flow based on observable yield curves.
- Other techniques, such as discounted cash flow analysis, are used to determine fair value for the remaining financial instruments.

The fair values of derivative financial instruments of the subsidiaries were determined based on the future cash flow (asset and liability position), taking into account the contracted conditions and bringing this flow to its present value by means of the discounted future interest rates disclosed in the market. The fair values were estimated at a specific time, based on the information available and on the Company's own valuation methodologies.

Financial instruments by category

The Company's financial instruments by category can be summarized as follows:

December 31, 2018

Measured at an

Assets, per balance sheet

Derivative financial instruments

Trade accounts receivable and other accounts receivable, excluding prepayments

Marketable securities

Cash and cash equivalents

Leasing

Judicial deposits

Other assets to offset

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	Measured at amortized cost	Fair value
	8,296,570	
Liabilities per balance sheet		
Borrowing and financing	1,663,017	
Derivative financial instruments		
Suppliers and other obligations, excluding legal obligations	4,323,374	
Leasing	1,940,074	
Dividends payable	370,105	

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As at December 31, 2018 and 2017

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December 31, 2017

	Measured at an
Assets per balance sheet	7,168,259
Derivative financial instruments	-
Trade accounts receivable and other accounts receivable, excluding prepayments	2,567,063
Marketable securities	-
Cash and cash equivalents	2,960,718
Leasing	205,331
Judicial deposits	1,366,576
Other assets to offset	68,571

Measured at an

10,708,264

Liabilities per balance sheet	-
Borrowing and financings	4,690,944
Derivative financial instruments	-
Suppliers and other obligations, excluding legal obligations	3,986,557
Leasing	1,887,172
Dividends payable	143,591

The regular purchases and sales of financial assets are recognized as at the trade date - the date on which the Company undertakes to buy or sell the asset. Investments are initially recognized at fair value. After initial recognition, changes in the fair value are booked in income for the year as finance income and expenses.

Financial risk hedge policy adopted by the Company – Synthesis

The Company's policy states that mechanisms must be adopted to hedge against financial risks arising from borrowing in foreign currency, so as to manage the exposure to the risks associated with exchange variations.

Derivative financial instruments hedging against exchange variations must be acquired simultaneously with the closing of the debt that gave rise to that exposure. The coverage level for this exchange exposure is 100% of the risk, both in terms of maturity date and amount.

As of December 31, 2018, no types of margins or collateral applied to the Company's or the subsidiary's transactions involving derivative financial instruments.

The criteria for choosing the financial institutions abide by parameters that take into account the rating provided by reliable risk analysis agencies, shareholders' equity and concentration levels of transactions and funding.

The transactions involving derivative financial instruments entered into by the subsidiaries and outstanding as at December 31, 2018 and December 31, 2017 are shown in the table below:

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December 31, 2018

Currency	SWAP Type	COUNTERPARTY		Total Debt	Total Swap (Asset Side)	% Coverage	AVERAGE Asset Side
		DEBT	SWAP				
USD	LIBOR X DI	KfW	JP Morgan	43,420	43,420	100%	LIBOR 6M + 1.18%
USD	LIBOR X DI	KFW/ Finnvera	JP Morgan and BOFA	378,595	393,387	100%	LIBOR 6M + 1.18%
USD	PRE X DI	CISCO	Santander and JP Morgan	116,466	116,466	100%	2.18%

December 31, 2017

Currency	Swap type	COUNTERPARTY		Total Debt	Total Swap (Asset Side)	% Coverage	AVERAGE Asset Side
		Debt	SWAP				
USD	LIBOR X DI	KfW	JP Morgan	110,937	110,937	100%	LIBOR 6M + 1.18%
USD	LIBOR X DI	KFW/ Finnvera	JP Morgan and BOFA	260,522	260,522	100%	100% LIBOR 6M + 1.18%
USD	PRE X DI	CISCO	Santander and JP Morgan	198,990	198,990	100%	2.18%

In June 2018, the Company capitalized on the favorable window in the market to close in advance a forward swap transaction. The purpose was to guarantee an attractive cost of 92.59% of the CDI rate for the third tranche of the KfW/Finnvera foreign currency finance agreement. Disbursement took place on September 17, 2018, for a face amount of 40 million US Dollars.

In August 2018, the Company purchased US Dollar call options in the amount of US\$100 million, with a strike price of R\$4.00, in order to reduce the effects of foreign exchange variations on business contracts. The options were divided into nine maturity brackets worth US\$11.1 million each (October 2018 to June 2019), and they were purchased for the initial amount of R\$11.7 million, taking into account a reference spot price of R\$3.7655 upon purchase. Due to the increase in US Dollar rates and a reduction in the risk exposure of business contracts, the Company settled the installments maturing in October 2018 and November 2018 in advance, for the price of R\$5.6 million, considering a reference spot price of 4.157 at the time of the sale. In November 2018, considering the close maturity dates and the reduced risk exposure in commercial agreements, the Company settled in advance those maturing in December 2018 and in January and February 2018 in the amount of R\$1.0 million, considering a reference spot price at the time of sale of 3,807. As at December 31, 2018, the book value of the remaining amount was accounted for R\$4.1 million – Assets (US Dollar reference spot price of R\$3.8748).

Position showing the sensitivity analysis – effect of variations in the fair value of the swaps

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In order to identify possible distortions arising from consolidated derivative financial instrument transactions currently outstanding, a sensitivity analysis was carried out taking into account three different scenarios (probable, possible and remote) and their respective impacts on the results, as follows:

Description	2018	Probable Scenario	Possible Scenario	Remote Scenario
Debt in USD (Cisco and KFW)	549,393	549,393	700,368	869,825
A) Δ Aggregate debt variation			150,975	320,432
Fair value of the asset side of the swap	549,393	549,393	700,368	869,825
Fair value of the liability side of the swap	483,503	483,503	470,044	467,868
Swap result	1,032,896	1,032,896	1,170,412	1,337,692
B) Δ Aggregate swap variation			137,516	304,797
C) Final result (B-A)			13,459	15,635

Given the characteristics of the derivative financial instruments of the subsidiaries, the Company's assumptions basically took into account the effects of: i) the variation in the CDI, ii) the variation of the LIBOR rate, and iii) the variation in the US Dollar rate used in the transactions, achieving, respectively, the percentages and quotations indicated below:

Risk variable	Probable scenario (current)	Possible scenario	Remote scenario
CDI	6.40%	8.00%	9.60%
LIBOR	2.88%	3.59%	4.31%

USD	3.8748	4.8435	5.8122
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As the subsidiaries hold derivative financial instruments to hedge their respective financial debt, the variations in the scenarios are monitored from the respective subject of the hedge, thereby showing that the counterpart of the effects involving the exposure created by the swaps will be reflected in the debt. In the case of these transactions, the subsidiaries disclosed the fair value of the subject matter (debt) and the derivative financial instrument of the hedge on separate lines, as shown in the sensitivity analysis position above, so as to reveal the net exposure of its subsidiaries in each of the three scenarios mentioned.

Attention is drawn to the fact that the sole purpose of the transactions entered into by the subsidiaries involving derivative financial transactions is to protect their balance sheet positions. Therefore, any improvement or deterioration in their respective market values will represent an inverse movement in the corresponding installments of the financial debt contracted, which is the subject matter of the subsidiaries' derivative financial instruments.

Sensitivity analyses referring to the derivative financial instruments outstanding as at December 30, 2018 were conducted basically taking into account the assumptions surrounding the variations in market interest rates and the variation of the US Dollar used in the swap agreements. The use of those assumptions in the analyses was exclusively due to the characteristics of the derivative financial instruments, which represent exposure to interest rate and exchange variations only.

Position showing gains and losses with derivatives in the year

	2018
Net income from USD vs. CDI transactions	58,508

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Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns to shareholders and benefits to other stakeholders, in addition to maintaining an optimal capital structure to reduce the cost of capital. In order to maintain or adjust its capital structure the Company can review its policy on paying dividends, returning capital to the shareholders or issuing new shares or selling assets to reduce its level of indebtedness, for example.

	2018	2017
Total borrowing and derivatives (Notes 19 and 36)	1,593,227	4,642,617
Commercial leases - Liabilities (Note 15)	1,940,074	1,887,172
Commercial leases - Assets (Note 15)	(208,049)	(205,331)
Less: Cash and cash equivalents (Note 4)	(1,075,530)	(2,960,718)
FIC (Note 5)	(784,841)	(765,614)
Net debt – Unaudited	1,464,881	2,598,126
EBITDA (1) (past 12 months) – Unaudited	6,371,844	5,947,023
Financial leverage ratio (*) – Unaudited	0.23	0.44
(1) Reconciliation with net income for the year:		
Net income for the year	2,545,101	1,234,507
Depreciation and amortization	3,954,321	4,013,671
Net financial result	537,333	497,836
Income and social contribution taxes	(664,911)	201,009
EBITDA (Unaudited) (**)	6,371,844	5,947,023

(*) The variation in the ratio includes the effect of the sale of towers.

(**) Earnings before interest, tax, depreciation and amortization.

Changes in financial liabilities

Changes in liabilities due to financing activities, such as borrowing and financing, financial leasing and financial instruments are presented below:

	Borrowing and financing	Financial leasing	Derivative financial instruments (assets) liabilities
December 31, 2017	4,690,944	1,887,172	(48,327)
Inflow	166,548	38,985	(13,628)
Financial charges	284,037	266,328	15,423
Foreign exchange rate variations, net	73,889	-	(73,931)
Payments	(3,552,400)	(252,411)	50,673
December 31, 2018	1,663,018	1,940,074	(69,790)

	Borrowings and financing	Finance lease	Financial instruments (assets) liabilities
December 31, 2016	6,719,782	1,802,238	(135,449)
Additions	646,854	48,957	17,675
Financial interests	611,369	257,305	53,062
Foreign exchange variations, net	(16,491)		16,385
Payments	(3,270,570)	(219,189)	-
Other		(2,139)	-
December 31, 2017	4,690,944	1,887,172	(48,327)

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37 Insurance

The Company and its subsidiary have a policy for monitoring the risks inherent in their operations. Accordingly, as at December 31, 2018, the Company and its subsidiary had insurance coverage against operating risks, third-party liability and health, among others. The Management of the Company and of its subsidiary consider that insurance coverage is sufficient to cover eventual losses. The table below shows the main assets, liabilities or interests insured and their respective amounts:

Types	Amounts insured
Operating risks	R\$37,705,747
General third-party liability - RCG	R\$80,000
Vehicles (executive and operational fleets)	R\$1,000 for civil liability optional (property damages and personal injury) and R\$100 for moral damages

38 Commitments

Leases

The Company and its subsidiary rent equipment and properties under various leases agreements with different maturity dates. Below is a list of minimum rental payments committed under such agreements:

	5,895,699
2019	1,088,506
2020	1,132,046
2021	1,177,328
2022	1,224,421
2023	1,273,398

39 Subsequent events

In January 2019, through its subsidiary TIM S.A., the Company issued R\$1,000 million unsecured non-convertible Debentures, with additional personal guarantee from the Company, for public distribution with restricted efforts. The proceeds will be used to strengthen working capital and will pay interest at 104.10% of the CDI for a period of 18 months.

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