Telecom Italia Finance Group

Consolidated Financial Statements 2022

Audited Consolidated Annual Accounts as at December 31, 2022, which have been authorized by the Board of Directors held on March 10, 2022

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Directors' report

The Business Units

BRAZIL

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

- TIM BRASIL SERVIÇOS E PARTICIPAÇÕES S.A.
  - TIM S.A.
    - I-SYSTEM SA
    - COZANI RJ INFRAESTRUTURA E REDE DE TELECOMUNICAÇÕES S.A

OTHER OPERATIONS

This Business Unit provides financial assistance to TIM Group companies and the management of liquidity buffer through money market instruments.
As of December 31, 2022:

- The amount of notes (issued by Telecom Italia Finance and listed on Bourse of Luxembourg) is 1.015 million euros.
- The amount of net financial debt is equal to -2.854 million euros.

- TELECOM ITALIA FINANCE

Key operating Financial Data

Consolidated Operating and Financial Data

(million euros)	31/12/2022	31/12/2021
Revenues	**3.963**	**2.840**
EBITDA	**1.828**	**1.355**
EBIT	**581**	**466**
Profit (loss) before tax from continuing operations	254	476
Profit (loss) for the year	**221**	**437**
Profit (loss) for the year attributable to Owners of the Parent	120	282
Capital expenditures	**870**	**1.253**

Consolidated Financial Position Data

(million euros)	31/12/2022	31/12/2021
Total assets	**15.868**	**14.117**
Total equity	**7.911**	**7.282**
Attributable to Owners of the Parent	6.366	5.937
Attributable to non-controlling interests	1.545	1.345
Total liabilities	**7.957**	**6.835**
Total equity and liabilities	**15.868**	**14.117**
Share capital	**1.819**	**1.819**
Net financial debt carrying amount	**-492**	**-2.382**

Headcount

	31/12/2022	31/12/2021
Number in the Group at year end	9.405	9.335
Average number in the Group	8.803	8.869

Highlights

Acquisition of the Oi Group mobile business
On April 20, 2022, TIM S.A. (Brazilian subsidiary of the TIM Group), Telefônica Brasil S.A. and Claro S.A., after having fulfilled the conditions established by the Conselho Administrativo de Defesa Econômica (CADE) and the Agência Nacional de Telecomunicações (ANATEL), concluded the acquisition of the mobile telephone assets of Oi Móvel S.A. - Em Recuperação Judicial.
With the conclusion of the transaction, TIM S.A. now holds 100% of the share capital of Cozani RJ Infraestrutura e Rede de Telecomunicações S.A. ("SPE Cozani"), a company that corresponds to part of the assets, rights and obligations of Oi Móvel acquired by the company.
In particular, TIM S.A. has been allocated:

- approximately 16 million customers;
- approximately 49 MHzl;
- approximately 7,2 thousand mobile access sites.

In September 2022, TIM S.A. and the other buyers of the Oi Móvel mobile telephone assets had identified differences in the assumptions and calculation criteria that, under the terms of the Share Purchase Agreement and Other Covenants ("SPA"), justify a proposal to change the Adjusted Closing Price ("ACP"). As far as TIM S.A. is concerned, the impact of such difference amounts approximately to 1,4 billion reais (0,3 billion euros). In addition to differences relating to the Adjusted Closing Price, others have also been identified relating to the contracts of Cozani (the company into which the business unit corresponding to TIM S.A.'s share of the assets, rights and obligations of the Oi Móvel mobile telephone business, flowed) with companies supplying mobile infrastructure services (site/tower rental), which, under the terms of the SPA, give rise to indemnity by the Seller in TIM S.A.'s favor, of approximately 231 million reais (42 million euros). As a result of the differences found, TIM S.A. retained an amount of 634 million reais (116 million euros - 671 million reais at December 31, 2022).
In October 2022, considering the Seller's express violation of the dispute resolution mechanisms provided for in the SPA, TIM S.A. communicated that the Buyers had no other alternative but to file an arbitration procedure with the Market Arbitration Chamber (Câmara de Arbitragem do Mercado) of B3 S.A. - Brasil, Bolsa, Balcão against the Seller to determine the effective amount of the adjustment to the Adjusted Closing Price, in accordance with the SPA.
Additionally, in October 2022, the 7th Business Court of the Judicial District of Rio de Janeiro handed down a preliminary decision, determining the deposit in court by the Buyers of approximately 1,53 billion reais (0,3 billion euros) – of which approximately 670 million reais (123 million euros) by TIM S.A. – in an account linked to the court-ordered reorganization process of Oi, where it will be safeguarded until a later decision by the arbitration court.
Further details are provided in the Note "Disputes and pending legal actions, other information, commitments and guarantees".

Parent's activity

In 2022 the Parent's activities continue to be segmented into two business: holding of participations and financial assistance to Telecom Italia Group ("TIM Group") companies.

MACROECONOMIC ENVIRONMENT

The international scenario was marked by many uncertainties and volatility with high inflation rates, led by commodity, food, and logistical and production bottleneck, as well as a reduction in GDP growth rates in most countries. The United States showed a slowdown in the inflation rate to 7,8%, a percentage that reached 9,1% at the maximum level for the year, and GDP growth of 2,1% compared to an expansion of 5,9% in 2021. The economy in Europe shows a low pace of growth, greatly impacted by the effects of the Russian invasion of Ukraine, that affected the pace of the resumption of the post-pandemic economy. China suffered from new lockdowns due to the COVID-19 pandemic, impacting its economic activity, which showed an improvement in the third quarter. The GDP of the Organization for Economic Co-operation and Development (OECD) member

countries increased 0,4% in the third quarter. The International Monetary Fund (IMF) points to a forecast of 3,2% growth for the global economy in 2022.
In Brazil, with a scenario of uncertainties, mainly in a year of elections that would become totally polarized, which was confirmed, the prospects for the year 2022 were not so positive.
Despite initial expectations, Brazil recorded a decrease in the unemployment rate (8,7% in the third quarter of the year), registering the lowest number since 2015 and continuing a series of declines over the last quarters, impacted by the process of immunization against COVID-19 started in the previous year. Government measures on the eve of elections, such as the expansion of the Auxílio Brasil program, were factors that helped boost economic activity. Thus, the projection of the Brazilian Gross Domestic Product (GDP) ended the year at 3,04%, according to the latest FOCUS report for the year, compared to the 0,28% growth forecast in the first FOCUS report of 2022.
Inflation, measured by the Extended Consumer Price Index (IPCA), ended 2022 at 5,62%, above the estimated target for the year (3,5%). Among the factors that impacted such result, the food industry recorded an increase of 11,6%, compared to 7,9% in the previous year, as a result of worse weather conditions during the period. Increases in commodity prices, mainly oil, also played a role in pushing inflation above the target ceiling for the second year in a row.
In 2022, the exchange rate recorded great volatility, with the Real appreciating against the US dollar compared with previous year end. At the last closing period, the American currency quoted at 5,28 reais, accounting for an appreciation of 5,2%. Uncertainties regarding American inflation and external factors such as the Russian invasion of Ukraine contributed to the oscillating trend of the currency. The Brazilian Real, have fluctuated against the dollar between 5,68 and 4,60 reais per one dollar in a scenario of domestic uncertainties, fiscal risks and debated reforms (i.e. the Transition Constitution Amendment Proposal (PEC). The trade balance ended the year with a surplus of 62 billion US dollars, accounting for an increase of 1,6% compared to the end of 2021. Exports closed the year at 355 billion US dollars and recorded a positive change of 19,3% compared to 2021. Imports recorded 272,7 billion US dollars, accounting for a growth of 24,3% in the annual comparison. The export and import values represent the highest records of the entire historical series.

FINANCIAL HIGHLIGHTS

In terms of economic and financial performance in 2022:

- **Consolidated revenues** amounted to 4,0 billion euros, up by 39,6% on 2021.
- **EBITDA** amounted to 1,8 billion euros, up by 34,9% on 2021.
- **Operating profit (EBIT)** was 0,6 billion euros, up by 24,7% compared to 2021.
- The **Profit for the year attributable to Owners of the Parent** amounted to 120 million euros (282 million euros for 2021).
- **Capital expenditures** in 2022 amounted to 870 million euros (1.253 million euros in 2021).
- **Net financial debt** amounts to -492 million euros at December 31, 2022, up of 1.889 million euros compared to the end of 2021 (-2.382 million euros).

NON-RECURRING EVENTS

In 2022, the Group recognized non-recurring net income connected to events and transactions that by their nature do not occur continuously in the normal course of operations and have been shown because their amount is significant.

Net non-recurring income

(millions of euros)	31/12/2022
Purchase of goods and services	-25
Employee benefits expenses	-2
Impact on EBITDA	**-27**
Impact on EBIT	**-27**
Other Income from Investments	-3
Impact on Profit (loss) before tax from continuing operations	**-30**
Non recurrent fiscal impact	9
Impact on Profit (loss) from continuing operations	**-21**

In 2022, the non-recurring events are mainly related to the acquisition of the mobile business of the Oi Group in Brazil.

Consolidated operating performance

The operating performance of the Group is almost entirely attributable to the Brazil Business Unit.

	Other operations (millions of euros)		Brazil Business Unit (millions of euros)		(millions of reais)		Changes	
	31/12/2022	31/12/2021	31/12/2022	31/12/2021	31/12/2022	31/12/2021	Amount	%
					(a)	(b)	(a-b)	(a-b)/b
Revenues	—	—	**3.963**	**2.840**	**21.531**	**18.058**	**3.473**	**19,2**
EBITDA	**-11**	**-7**	**1.839**	**1.362**	**9.993**	**8.661**	**1.332**	**15,4**
EBITDA Margin			46,4	48,0	46,4	48,0		-1,6 pp
EBIT	**-11**	**-7**	**593**	**473**	**3.236**	**3.010**	**226**	**7,5**
EBIT Margin			15,0	16,7	15,0	16,7		-1,7 pp
Headcount at year end (number)	**10**	**10**			**9.395**	**9.325**	**70**	**0,8**

The average exchange rates used for the translation into euro (expressed in terms of units of real per 1 Euro) were 5,43993 in 2022 and 6,35936 in 2021.

	31/12/2022	31/12/2021
Lines at period end (thousands)	62.485	52.066
ARPU (reais)	26,1	26,4

REVENUES

Revenues in 2022 were entirely related to the Brazil Business Unit and amounted to 21.531 million reais (3.963 million euros), up by 19,2% on 2021 speeding up on the levels recorded from the fourth quarter of 2021.
Excluding the revenues from the mobile business of the Oi Group (Cozani, acquired on April 20, 2022) revenues 2022 are 20.759 million reais (3.816 million euros).

The acceleration has been determined by **Revenues from services** that totaled 20.829 million reais (3.834 million euros), an increase of 3.332 million reais (1.083 million euros) compared to 17.497 million reais (2.751 million euros) in 2021 (+19,0%) with mobile service revenues growing 19,8% compared to 2021. This performance is mainly related to the continuous recovery of the pre-paid and post-paid segments. Revenues from fixed telephony services have grown by 7,6% compared to 2021, determined above all by the growth rate of TIM Live.

Revenues from product sales came to 702 million reais, or 129 million euros (561 million reais, or 88 million euros in 2021).

Total mobile lines in place at December 31, 2022 amounted to 62,5 million, an increase of 10,4 million compared to December 31, 2021 (52,1 million), mainly following the acquisition of the Cozani customer base. This overall increase came from the pre-paid segment (+6,0 million) and the post-paid segment (+4,4 million) and is mainly due to the acquisition of the Oi's customer base. Post-paid customers represented 43,6% of the customer base as of December 31, 2022 (43,9% at December 2021).
The TIM Live BroadBand business recorded net positive growth in the customer base of 31 thousand users compared to December 31, 2021. In addition, the customer base continues to be concentrated on high-speed connections, with more than 50% exceeding 100Mbps.

Mobile Average Revenue Per User (ARPU) for 2022 was 26,1 reais (4,8 euros), down 1,1% compared to the figure posted in 2021. The decrease is due to the impact of the dilution effect caused by the addition of customers from Oi.

	31/12/2022	31/12/2021
(millions of reais)		
Net revenues	**21.531**	**18.058**
Service revenues	20.829	17.497
Mobile services	19.594	16.349
Fixed services	1.235	1.148
Product revenues	702	561
(thousands)		
Lines at period end	**62.485**	**52.066**
Average Market Lines	**62.514**	**51.667**
(reais)		
Mobile ARPU (mobile services/average market lines/months)	**26,1**	**26,4**

EBITDA

EBITDA in 2022 totaled 1.828 million euros, of which 1.839 million euros attributable to the Brazil BU.

Considering Brazil BU, EBITDA for 2022 amounted to 9.993 million reais (1.839 million euros), up by 1.332 million reais (477 million euros) year-on-year (+15,4%).

EBITDA in 2022 is affected by non-recurring expenses of 128 million reais mainly related to the development of non-recurring projects and corporate reorganization processes.

EBITDA for the Brazil BU net of the non-recurring component (Organic EBITDA), grew by 16,4% and is calculated as follows:

	(millions of euros)		(millions of reais)		Change	
	31/12/2022	31/12/2021	31/12/2022	31/12/2021	Amount	%
	(a)	(b)	(c)	(d)	(c-d)	(c-d)/d
EBITDA	**1.839**	**1.362**	**9.993**	**8.661**	**1.331**	**15,4**
+/- Non recurring expenses/(income)	24	6	128	36	92	
= Organic EBITDA	**1.863**	**1.368**	**10.121**	**8.697**	**1.424**	**16,4**

The increase of EBITDA is due to the greater revenues as well as the consolidation of Cozani (579 million reais - 106 million euros).

The related margin on revenues stood at 47,0%, down in organic terms by 1,2% compared to 2021.

The changes in the main costs for the BU are shown below:

	(millions of euros)		(millions of reais)		
	31/12/2022	31/12/2021	31/12/2022	31/12/2021	Change
	(a)	(b)	(c)	(d)	(c-d)
Purchase of goods and services	1.562	1.037	8.490	6.592	1.897
Employee benefits expenses	311	237	1.690	1.506	184
Other operating expenses	367	283	1.992	1.798	194
Change in inventories	-6	7	-34	44	-78

EBIT

EBIT totaled 581 million euros (466 million euros in 2021), an increase of 115 million euros.

Considering Brazil BU, EBIT for 2022 amounted to 3.236 million reais (593 million euros).

Organic EBIT, net of the non-recurring component, amounted to 3.364 million reais (616 million euros), with a margin on revenues of 15,6% (16,9% in 2021), and was calculated as follows:

	(millions of euros)		(millions of reais)		Change	
	31/12/2022 (a)	31/12/2021 (b)	31/12/2022 (c)	31/12/2021 (d)	Amount (c-d)	% (c-d)/d
EBIT	**593**	**473**	**3.236**	**3.010**	**226**	**7,5**
+/- Non recurring expenses/(income)	24	6	128	36	92	
= Organic EBIT	**616**	**479**	**3.364**	**3.046**	**318**	**10,4**

PROFIT (LOSS) FOR THE YEAR

(million euros)	31/12/2022	31/12/2021
Profit (loss) for the year	**221**	**437**
Attributable to		
Owners of the Parent	120	282
Non-controlling interests	102	155

CAPITAL EXPENDITURE

All capital expenditure is referred to the Brazil Business Unit. The BU posted capital expenditures in 2022 of 870 million euros, decreasing by 383 million euros on 2021 (1.253 million euros). Excluding the impact of changes in exchange rates (+211 million euros), capital expenditure decreased by 594 million euros. In particular, in 2021 the capital expenditures of the Business Unit Brazil included the acquisition of 5G frequencies (564 million euros). In 2022, excluding 5G licences, the organic comparison shows +5,7% of increase. Technological investments represent 91% of total Capex and were mainly driven by mobile BB coverage (achieving completion of 100% of Brasil municipalities), capital cities robust coverage with new 5G SA technology and full completion of OI infrastructure integration. Besides Mobile Core Business expansion, the company continued to focus on the development of UBB residential business with Ftth technology (UltraFibra).

Consolidated financial position and cash flows performance

Non-current assets

Non-current assets are mainly referred to the Brazil Business Unit.

- **Goodwill** increased by 534 million euros, +502 million euros (2.636 million reais at the exchange rate real/euro of 5,25403) as a result of the acquisition on April 20, 2022 of the OI Group mobile business (further details in the highlights of this Directors' report) and +32 million euros of changes in foreign exchange rates applicable to the Group's Brazilian operations. Further details are provided in the Note "Goodwill".

- **Other intangible assets** increased by 782 million euros representing the balance of the following items:
  - Capex (+215 million euros)
  - Amortization charge for the year (-338 million euros)
  - Disposals, exchange differences, reclassifications and other changes (for a net balance of +220 million euros), of which +175 related to exchange rate differences.
  - Other changes for 685 million euros refer mainly to the entrance into the consolidation scope of the mobile telephone assets of Oi Móvel S.A. acquired by the TIM Group in April 2022 (further details in the highlights of this Directors' report).

- **Tangible assets** increased by 456 million euros representing the balance of the following items:
  - Capex (+650 million euros)
  - Depreciation charge for the year (-514 million euros)
  - Disposals, exchange differences, reclassifications and other changes for a net balance of +208 million euros of which +221 related to exchange rate differences.
  - Other changes for 112 million euros refer mainly to the entrance into the consolidation scope of the mobile telephone assets of Oi Móvel S.A. acquired by the TIM Group in April 2022 (further details in the highlights of this Directors' report).

- **Rights of use third-party assets:** increased by 728 million euros representing the balance of the following items:
  - Investments and increases in finance leasing contracts (+489 million euros)
  - Amortization charge for the period (-409 million euros)
  - Disposals, exchange differences and other changes (for a net balance of +90 million euros) of which +140 related to exchange rate difference.
  - Other changes for 558 million euros refer mainly to the entrance into the consolidation scope of the mobile telephone assets of Oi Móvel S.A. acquired by the TIM Group in April 2022 (further details in the highlights of this Directors' report).

Consolidated equity

Consolidated equity amounted to 7.911 million euros at December 31, 2022 (7.282 million euros at December 31, 2021), of which 6.366 million euros attributable to Owners of the Parent (5.937 million euros at December 31, 2021) and 1.545 million euros attributable to non-controlling interests (1.345 million euros at December 31, 2021).

Cash flows

(million euros)	31/12/2022	31/12/2021
Cash flows from (used in) operating activities	1.782	1.420
Cash flows from (used in) investing activities	-1.614	-1.811
Cash flows from (used in) financing activities	-376	635
Aggregate cash flows	**-208**	**244**
Net foreign exchange differences on net cash and cash equivalents	-45	6
Net cash and cash equivalents at beginning of the year	**3.239**	**2.995**
Net cash and cash equivalents at end of the year	**3.031**	**3.239**

Net financial debt

Net financial debt amounts to -492 million euros at December 31, 2022, up of 1.889 million euros compared to the end of 2021 (-2.382 million euros). The increase is mainly due to the acquisition in Brazil on April 20, 2022 of the OI Group mobile business (further details in the highlights of this Directors' report) for 1.741 million euros.

(million euros)	**Other operations**		**Brazil Business Unit**	
	31/12/2022	31/12/2021	31/12/2022	31/12/2021
Non-current financial liabilities	1.503	1.745	2.726	1.885
Current financial liabilities	936	1.220	704	324
Total gross financial debt	**2.440**	**2.965**	**3.430**	**2.209**
Non-current financial assets	-1.550	-1.811	-156	-116
Current financial assets	-3.744	-4.042	-912	-1.587
Net financial debt carrying amount	**-2.854**	**-2.888**	**2.361**	**506**

Further details are provided in the Note "Net Financial Debt".

Main commercial developments of the business units of the Group

Brazil

2022 was marked by the successful launch of the 5G, and TIM confirmed its leadership in coverage in the new technology. The Oi integration is also an important achievement, which includes the clients' migration, and the network integration. Consequently, the company was able to sustain a strong pace of revenue growth in mobile despite the macroeconomic challenges. On the fixed, we are focusing on a massive FTTC to FTTH customer migration to maximize customer experience and profitability. Additionally, our beyond the core initiatives, both in IoT and digital services, grew in number of partnerships and contribution to our results.
Marketing and brand positioning: we reinforced the credibility of our brand, supporting social developments and digitalization in Brazil, while building-up the network quality attribute. We used our achievements in network rollout – TIM was the first operator to cover 100% of the municipalities of the country and achieved

the 5G coverage leadership – as key assets to our communication to clients and stakeholders in general. TIM has also been on the forefront of innovation in the past years, and we will continue to drive innovation through content and partnerships, such as the partnerships with Deezer and Amazon Prime Video, and the Rock in Rio Sponsorship, the largest music festivals in the world, to reinforce our brand connection with music and entertainment. We also developed many initiatives to solidify our institutional positioning with the ESG agenda embedded in the business strategy.
Mobile offers: To accelerate growth beyond connectivity we continue scale up partnerships leveraging our user base and key assets to expand new businesses. We aim to become the most preferred telco in Brazil, and we developed differentiated offers to all segments. TIM has the best prepaid offer in Brazil by combining music and video content with music streaming service DeezerGo, and Amazon Prime Video. In the post-paid segment, we maintained our effort to consolidate our position as an innovator and became the first telco in Brazil to launch an offer of free wi-fi during flights for TIM Black customers, in an innovative partnership with Gol and LATAM airlines.
Customer Experience: We are constantly working to improve our customer experience and satisfaction using technology. In this regard, the evolution of AI solutions and our digital channels are key. In the 2022 Satisfaction and Complains survey of Anatel (National Telecommunication Agency) TIM Brasil remain in the first place in the mobile services ranking and awarded with Reclame Aqui RA 1000 certificate for excellence in customer service. The quality of our network was also recognized by Ookla Speedtest ranking, as TIM was appointed the best video and video conference experience while having the highest 4G availability.
Sales channels: we maintained our focus on channel productivity, segmentation, and quality of sales. During 2021, we remodeled our digital channels while reorganizing our structure to increase focus on e-commerce and in-app purchases. In 2022, TIM created sales app for autonomous professionals, through TIM + Vendas app, autonomous professionals can register on the app to resell the company's SIM cards and recharges, thus ensuring an additional income.
Residential market: In 2022, we are focusing on a massive FTTC to FTTH customer migration to maximize customer experience and profitability while consolidating the asset-light model to expand our footprint through neutral network partnerships as the one with I-Systems.
Corporate: we consolidated our "Leaders with Leaders" strategy in agribusiness and launched the first IoT marketplace for B2B in Brazil by promoting IoT solutions through partnerships. In addition, we launched the FCA partnership for connected cars and for industry and mining we are developing a private LTE solution for business-critical use case management. In 2022, TIM pursued new opportunities to become a full vertical orchestrator, such as fleet monitoring and managements, and solution for smart lighting, meter reading and distribution automation.

Main changes in the regulatory framework

Brazil

Revision of the model for the supply of telecommunications services
In 2019, Law 13.879 was approved and entered into force on October 4, 2019 establishing a new regulatory environment for the regulation of telecommunications in Brazil. This is the most significant change in 20 years.
The new telecommunications framework allows fixed-line licensees to adapt their contracts from a concession scheme to an authorization scheme. This transition from concession to authorization must be requested by the licensee and requires the approval of the Anatel ("Agencia Nacional de Telecomunicações"). In return, licensees must, among other conditions, make a commitment to investment in expanding fixed broadband telephony services to areas with no adequate competition for these services, in order to minimize inadequacies and inequalities between areas of Brazil.
The change also affects the roles for authorizing the use of radio frequencies, establishing subsequent renewals (currently limited to only one) and allows the exchange of radio frequencies between operators (secondary spectrum market).
In June 2020, Decree 10.402 was published, which governs the procedure for adapting the concession to the authorization regime, as well as the definition of the criteria for calculating investment commitments. The Decree also established guidelines for the extension of radio frequency authorization, which will be held by Anatel to guarantee greater security for investments in the sector.

Public policies applicable to telecommunications sector
Decree 9.612/2018 ("Connectivity Plan") established important rules with a series of guidelines for the adaptation of conduct terms, the onerous concession of spectrum authorization and regulatory acts in general, including: (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 through this type of infrastructure. This Decree also establishes that the network resulting from the commitments must be shared from the moment it enters into service, except where there is adequate competition in the relative reference market.

In relation to the deadlines for the development of pipelines not compliant with current regulations, authorizations for user licenses to radio frequencies, and the introduction of other statutory provisions generally, planned investments (as identified by Anatel and approved by the MCTI ("Ministério da Ciência, Tecnologia e Inovações") will focus primarily on the expansion of mobile and fixed-line broadband networks and on specific areas of the country. Telecommunications networks built under the investment plan will have shared access. The Decree was amended by Decree 10.799/2021, which included priorities for public policy coverage, including coverage of "census sectors with public schools"; coverage of villages not served with cell phone telephony and expansion of fixed broadband access in locations without access. Decree was amended by Decree 11.299/2022, which included possibility of federal private network to be operated exclusively by Telebras (Brazilian state company).
The decree also provides for the allocation of funds for the approval of approved projects of the Connected Cities and for the temporary provision of fixed or mobile broadband. In addition, it deals with the private federal network that may be implemented by other public or private bodies or entities and the criteria for the use and governance of the network will be defined by the Federal Government under the terms set out in an act of the Minister of State for Communications.
In 2020, the decree No. 10.480/2020 was published by the federal government, which regulates the antennas law (law 13.116/2015) with the purpose of stimulating the development of the telecommunications network infrastructure. This decree fosters development of telecom network infrastructure and is a major step towards unlocking historical problems in the sector preventing its development (free right of way on highways and railways, positive silence, small cells, dig once are some of the examples of such regulatory removal of historical problems).
In the same year, law 14.109/2020 granted the use of FUST ("Fundo de Universalização dos Serviços de Telecomunicação"), including by the private sector, to expand connectivity in rural or urban areas with a low human development Index (HDI) as well as policies for education and tech innovation of services in rural areas.
In June 15, 2021, Provisional Measure 1.018/2020 was transformed into Law No. 14,173/2021, reducing charges for satellite internet terrestrial stations and changing some of FUST application rules. The law reduces FUST collection between 2022 and 2026, to telecommunications operators that run universalization programs approved by the management council with their own resources. The benefit will be valid for five years from January 1, 2022 and will be progressive: 10% in the first year; 25% in the second year; 40% in the third year; and 50% from the fourth year onwards. In addition, the new legislation removes the obligation to share towers within a distance of less than 500 meters from each other. The elimination of this obligation is essential for the deployment of 5G in Brazil, including to ensure the densification scenario expected for the new technology.
In the first quarter of 2022, the Federal Government signed Decree 11.004/2022, which regulates the use of Fust and stablishes directions for the use of resources by the Management Board, instituted in June 2022. At the beginning of July, the internal regulations of the Fust Management Board were published and a budget for 2023 was proposed for digital inclusion.
Later in 2022, the management council defined in Res. 02/2022 more details of mechanisms for using the FUST, making clearer the role of the Financial Agent, the Accountability mechanism and Anatel's function to apply the reduction of the contribution in the waiver mechanism. The Council also presented programs aimed at connectivity for public elementary schools and projects to expand connectivity and subsidies for low-income users.

Revision of the service quality regulation
In December 2019, Anatel approved the new Telecommunication Services Quality Regulation (RQUAL), based on a reactive regulation. In this new model, quality is measured on the basis of three main indicators – a Service Quality Index, a Perceived Quality Index and a User Complaints Index – and operators are classified into five categories (A to E). Based on this reactive regulation, Anatel will be able to take measures according to specific cases, such as consumer compensation, the adoption of an action plan or the adoption of precautionary measures to ensure quality standard improvements.
After a joint work by Anatel, operators and the Quality Assurance Support Authority (ESAQ) to define the objectives, criteria and reference values of indicators, at the end of November 2021, Anatel's Board of Directors formalized the reference documents that supports this regulation: the Operational Manual and the Reference Values; and stipulated the entry into operational effectiveness in March 1, 2022, as well as the disclosure of official indexes, and the Quality Seal (inducing competition for quality) at the beginning of 2023, considering the results of the new monitored indicators in the 2nd semester of 2022.

Data protection
In August 14, 2018, the General Data Protection Law (Law 13.709/2018 – "LGPD") was enacted.
In December 2018, Provisional Measure 869/2018 created the National Data Protection Authority (ANPD), also extended the entry into force of the Law to 24 months (August 2020).
In June 2020, Law 14.010/2020, postponed the entry into force of the LGPD, only for the provisions related to fines and penalties, to August 2021. The other provisions of the Law took effect in September 2020. In addition, Decree 10.474/2020 (National Data Protection Authority) came into force in August 2020, establishing the ANPD (Brazilian National Data Protection Authority), which is responsible for, among other things: developing

guidelines for the National Data Protection Policy; supervising companies and applying sanctions; and issuing regulations and procedures on personal data protection.
In August 2021, the articles related to the supervisory and sanction activities of the National Authority (ANPD) entered into force.
In October 2021, were approved the regulation (CD/ANPD nº. 1 of October, 2021) for the Supervisory and Sanctioning Administrative Process, within the scope of the ANPD.
In January 2022, were approved the regulation (CD/ANPD nº 2 of January, 2022) implementing the LGPD for small processing agents.
In June 2022, a Provisional Measure nº 1124 was published, transforming the Brazilian National Data Protection Authority ("ANPD") into an independent agency of special nature. The PM has an immediate effect but must be subject to a Congressional approval to be made into law.
In October 2022 a Provisional Measure n° 1124 converted was Law 14.460/22 transforming the Brazilian National Data Protection Authority ("ANPD") into an independent agency of special nature.
In December 2022, was published the new incident report form, with incident reporting obligations in case of personal data breach.
In January 2023 ANPD becomes an autarchy linked to the Ministry of Justice and Public Security.

Digital Transformation, Internet of Things and Artificial Intelligence
In March 2018, the E-Digital Decree (9.319/2018 Decree) was published, in order to identify about 100 strategic actions to encourage competition and the country's level of online productivity, while increasing connectivity and digital inclusion levels. These actions seek to address the digital economy's main strategic questions, including connectivity infrastructure, data use and protection, the IoT and IT security. In December 2021, the MCTI started its revision and is expected to be approved by the end of 2022.
The Decree on the National Plan for the Internet of Things (Decree 9.854/2019) was published in June 2019, to regulate and promote this technology in Brazil. The IoT is referred to as the "infrastructure integrating the provision of value-added services with the ability to physically or virtually connect things using devices based on existing information and communication technology and their evolution, with interoperability". The Decree lists the following topics, defining them as necessary to further support the National Plan for the Internet of Things: (i) science, technology and innovation; (ii) international integration; (iii) education and professional training; (iv) connectivity and interoperability infrastructure; (v) regulation, security and privacy; (vi) economic feasibility.
In order to develop an IoT environment in the country, Law 14.108/2020 was passed. This law exempts base stations and equipment that integrate machine-to-machine (M2M) ecosystems from FISTEL (an administrative tax collected by Anatel) for 5 years and, in addition, extinguishes the previous license. The definition and regulation of M2M communication systems are established by Anatel.
In April, 2021, the Brazilian Strategy for Artificial Intelligence was published by MCTI with the objective of guiding the actions in favor of the development of research and innovation in solutions with the use of Artificial Intelligence, as well as its conscious use and ethical and ensuring innovation. In April, 2022, a Public Consultation was launched by the Senate in order to discuss the new regulatory framework for artificial intelligence in Brazil. The Public Consultation is being held by a comission of specializaded jurists that will address economic-social contexts and benefits of artificial intelligence (AI); sustainable development and well-being; innovation; AI research and development (resource funds and public-private partnerships); public security; agriculture; industry; digital services; information Technology; and healthcare robots.
In November 2022, MCTI published the Ordinance ("Portaria") No. 6.543, which approved the Brazilian Strategy for Digital Transformation ("E-Digital") for the 2022-2026 cycle. This regulation established actions aimed at the growth of the telecommunications market, industry 4.0, education, market and international practices, digitization of government platforms, privacy and security.

5G Auction
In February 2021, Anatel's board of directors approved the public notice for the 5G Auction. After that, there was an evaluation by Brazilian federal court of auditors (TCU) that was completed on August 25, 2021. Auction returned to Anatel for analysis, which approved the Notice on September 24, 2021. The auction expected to be held in the second half of 2021, occurred in November 2021. TIM acquired 11 lots, with a total value offered of 1,05 billion reais, in 3 frequency bands 3,5 GHz, 2,3 GHz and 26 GHz. The acquired bands have a set of obligations that must be met with financial contributions or the construction of mobile and fixed network infrastructure. As a result, TIM guarantees the necessary spectrum capacity to follow its growth journey in the mobile telephony market nationwide, being prepared for its customers' demands and to explore new applications and develop innovative solutions that demand high-speed connectivity and capacity.
Main commitments associated with each band:

- 2,3 GHz: 4G coverage in some municipalities and localities (South and Southeast Regions);
- 3,5 GHz: 5G coverage in all municipalities with a population equal to or greater than 30.000 inhabitants + fiber backhaul obligations in 138 municipalities + additional contributions to EAF ("Entidade Administradora da Faixa", new entity that has already been constituted) to carry out the

following projects: clean-up 3,5 GHz, deployment of fibre-optic in Amazonia and building a private network for exclusive federal government use;
- 26 GHz: contributions to EACE ("Entidade Administradora da Conectividade de Escolas", new entity that has already been constituted) to carry out connectivity schools' projects.

Competition

Brazil

In 2022, the macroeconomic scenario remained pressured by inflation, mainly due to food and energy prices, and interest rate. The whole process of the Presidential elections brought a lot of uncertainty and volatility, postponing investments. The dispute was clearly polarized between two populist candidates, which increased the country's fiscal risk. Lula, who ended up the winner, gave some signs to the market that he could make a pragmatic government, closer to his first government, but his choices for the country's main ministries left the situation doubtful. If before the market believed that interest rates had already stopped rising and the reduction would start in the first half of 2023, now it does not rule out a new increase, which would delay the beginning of the fall. In addition, on the international scene, the Russian invasion of Ukraine at the beginning of the year had an impact on the world economy, with emphasis on the increase in inflation.
The prospects for the coming years still show a challenging environment: the volatility should persist at least in 2023, given unclear election aftermath, lackluster economic growth limiting ability to sustain revenue growth in spite of the employment rate has been increasing since 2021 and persistent inflation driving need to manage costs. Since interest rates were increased as a measure to hold back inflation, it is expected a movement from investors to bank investments getting away from stock market.
The maintenance of the "Auxílio Brasil" at 600 reais, with an additional 150 reais for each child up to six years old and the increase of minimum wage above previous rule can support the consumption, including for telecommunication services.
The mobile telecommunications sector was consolidated in 2022 with the closing of the transaction for the sale of Oi. Buying companies are in the process of migrating their customer base and infrastructure. With one less player in the market, the sector has seen some rationality prevail in the market and in competition, with service providers maintaining the focus on developing their increasingly attractive offers for the consumer, not only in terms of price, but also with additional services, for example, through partnerships with companies that provide video streaming. The big challenge is to improve customer engagement, delivering a more convenient end-to-end experience with less friction with fully digital integration steps to reduce churn and seek to monetize the customer base.
In the prepaid segment, the customer base is decreasing 5,4% YoY in November 22, but much impacted by Oi's customer base acquired by TIM, Vivo and Claro switch off. With Oi out of the market (the more price aggressive player), resulting in a less competitive environment, it is expected more rationality in the market. The main objective of market players has been to raise the percentage for the use of services by leveraging the ongoing SIM card consolidation process in the market, by encouraging migration to weekly (and monthly) plans or hybrid plans (Controle postpaid) by offering a range of bundled service packages on the basis of the different needs of customers (unlimited voice calls or data packages). The strategy's aim is to improve the mix of the customer base and guarantee greater stability (together with reducing the churn rate) and growth of the ARPU.
The postpaid mobile segment records an increase in the customer base of 6,1% YoY in November 22, mainly due to M2M market growth, but also with relevant growth in postpaid ex-M2M market. This market is still under the effect of migrations from prepaid to hybrid "controle" segments, but this year was particularly affect by Oi's customer base acquired by TIM, Vivo and Claro switch off. With Oi out of the market, , it is expected more rationality in the market. This growth is based on offer segmentation strategies, through the introduction of distinctive characteristics in the use of data services (e.g. unlimited use of data on specific apps such as WhatsApp, Facebook, Twitter, Netflix, etc.) in pursuing a "More for More" policy logic that aims to guarantee a greater stability of prices and an effective repositioning of the customer base on higher value offers (voice + data + bundle with OTT contents).
Service quality is still an element of differentiation. Telecommunication providers that have invested more in the development of 4G networks (coverage and capacity) and in the improvement of processes shaping customers' experience will have a greater ability to apply premium prices, as customers raise their expectations and place growing importance on the quality of data services and higher value content. The main mobile operators already provide 4G coverage for 99,8% of the Brazilian population (up to November 2022), with the three main players offering average 4G availability in excess of 94% (according to the December 2022 Teleco report).
After the 5G auction in November 2021, 2022 was marked by the beginning of implementation of 5G in the country by operators. First, 5G was implemented in the country's major capitals and now will be following the schedule established on the auction of the most populous cities until completing all the municipalities. Operators' ultimate goal is to be able to increase mobile ARPU due to the consumption of new services

enabled by 5G (e.g.: latency-based rates, additional features such as entertainment packages). The 5G is expected to bring more new applications for B2B segment in a lot of industries. The 5G market already reached 5,1 million subscriptions by Nov-22 (representing 2% of the market).
The fixed broadband market registered a slowdown growth in the last year with growth of +7,7% in November 2022 (YoY), against +11,7% in November 2021 (YoY), maybe impacted by smaller internet service providers (ISPs) underreport. The growth comes mainly ISPs (+16,6% YoY in November 2022), which tend to offer cheaper services and reach areas where traditional operators have limited infrastructure. The main IPOs that took place in 2021 (Brisanet, Unifique and Desktop) besides other investment in ISPs brough some capital to increase coverage. As a result, traditional incumbent operators are experiencing sharp declines in their customer base, with the exception of TIM Live and Vivo. Population penetration rates are still quite low (around 60%, reaching 72 million households in Brazil in 2022) when compared to several countries, which means that there are good opportunities for growth in the medium term, sustained by the improvement of the macroeconomic.
In this context, since 2017, TIM adopted a business strategy for TIM Live to expand coverage and customer base, offering ultra-broadband Internet services, mainly through FTTH, not only in some of the largest cities of Brazil, but also in cities where have opportunities for such high-quality service. In additional, focusing on reduce friction points to improve retention. TIM Live has a customer base of more than 712 thousand users in November 2022 (growth of 4,2% YoY). In order to achieve faster and smart growth, the way was carve-out of fiber assets and deployment of asset light model to accelerate footprint growth. TIM Live was recognized for the 6th year as the best broadband service by a major Brazilian newspaper.

Research and development

Brazil
The Architecture & Architecture Evolution department is responsible for Research and Development (R&D) activities; its main tasks are to define technological innovation for the network and information technology, to identify evolutionary needs for new technologies and devices, converging architectonic guidelines and strategic alliances in order to use the new business models and guarantee that the network infrastructure evolution is in line with the corporate strategy.
In 2022, the Architecture & Technology Evolution department was made up of 52 people, including telecommunications, electrical and electronic, IT and other specialists with professional skills and experience, which cover all areas of network and IT knowledge, meeting the need to innovate and support research and development activities.
TIM Lab is the multifunction environment focused on innovation, which also plays a strategic role in supporting credibility tests and trials, as well as PoCs (proofs of concepts), collaborating with the main suppliers and technology partners through knowledge sharing, technological infrastructure for interoperability tests, staff assessment and the definition of technical requirements; in synergy with the R&D department, it facilitates innovation activities and promotes collaborations with universities and research institutes.
The TIM Lab Innovation Center has moved to São Cristóvão, city of Rio de Janeiro, in the State of Rio de Janeiro, has a surface area of 850 m2 and can also be used as an innovation space open to new opportunities, guiding innovation on the Brazilian telecommunications market and acting as national point of reference for R&D.
To strengthen the validation capacity regarding new software, features, solutions, technologies, services and devices, and also to expand its current structure in order to carry and develop more businesses and opportunities, in 2023-2024, TIM S.A. has planned additional investments for over 10 million reais.
The Architecture & Technology Evolution Department has continued to work on projects and initiatives for the evolution of the business of TIM, which can be grouped into the macro groups:

- next generation network;
- with positive impact on t/he environment and society;
- future Internet applications;
- Open Lab Initiatives.

<u>Next generation network projects</u>
The reassignment of the 1.800 MHz, 850 MHz and 2.100 MHz bands from 2G/3G to 4G, with a multilayer distribution configuration gives TIM SA three important competitive advantages:
- a reduction in costs for LTE implementation, the extension of the LTE coverage area and the activation of the carrier aggregation strategy, improving the customer experience through a higher throughput;
- the best indoor coverage. In addition to the expansion of coverage, use of the 850/1.800/2.100 MHz bandwidths could increase the capacity in cities already covered by the LTE bandwidth at 2,6 GHz, at limited additional cost.

In this scenario, over 99% of current LTE terminals are compatible with the 1,800 MHz, 2,600 MHz bands and other available bands. Therefore, the implementation of the multilayer LTE continues to be an excellent strategy that benefits from the spread of devices.
The implementation of the 700 MHz LTE layer has continued to significantly improve coverage expansion and indoor penetration, promoting the presence of LTE on a national level, and consolidating TIM S.A.'s leadership in LTE. 89% of TIM S.A.'s current user base of LTE devices is 700 MHz enabled (December 2021).
At the end of December 2022, 5.370 cities had 700 MHz LTE coverage, namely over 95,4% of the urban population; spectrum cleaning was completed in June 2019 in all cities of Brazil, enabling a bandwidth of 700 MHz.
Also at end 2022, TIM S.A. has covered all cities in Brazil, assuring 100% of nationwide presence, and anticipating the Industrial Plan in one year.
In 2022, TIM S.A. started deploying sites with the n78 band (3500 MHz), according to the regulatory rollout specified in the auction, which means that all capitals in Brazil have TIM's 5G SA (Standalone) coverage. Beyond that, TIM has more than double the coverage of its competitors. This frequency band has a 100 MHz bandwidth, that delivers higher throughput, and is currently used in the 5G networks.

<u>Projects entailing a reduction of energy consumption</u>
The expansion of "LTE RAN Sharing", in partnership with other mobile operators in Brazil to fulfill regulatory obligations from the 4G spectrum auction, aims to define the architectural requirements, technical assumptions and specifications for the "LTE RAN sharing" solution, optimizing network resources and costs. At present, this is the largest agreement for RAN sharing worldwide and it supplies 4G services to the main cities of Brazil.
The RAN sharing agreement allows TIM S.A. to promote the spread of LTE in the Brazilian campaign, effectively sharing spectrum, access and backhaul. At present and after Oi's acquisition, LTE RAN Sharing is a TIM S.A. and Telefónica partnership, based on the MOCN architecture, expanding the benefits and efficiency of this technical model. The energy consumption recorded for the site, dependent on the access technology and coverage conditions, showed a reduction of up to 10%.

In December 2019, TIM S.A. and Telefónica stipulated new sharing contracts aimed at increasing the network cost efficiency through the following initiatives:

- Single network: sharing of the 3G and 4G networks in cities with fewer than 30 thousand inhabitants in which both operators provide their services. The underlying idea is to have, in the cities included in the agreement, a single telecommunications infrastructure that is entirely shared by the operators, thereby allowing them to switch off redundant sites and save on energy, rent and maintenance costs. This also allows for greater efficiency in future investments thanks to the sharing of the spectrum in MOCN mode.
- Switching off of the 2G: nationwide sharing of the 2G network using GWCN technology, enabling both operators to switch off part (approximately 50%) of its network with the same technology, consequently saving on energy and maintenance costs.

<u>Next generation network projects, future Internet applications, positive impact on the environment and society</u>
Internet of Things - It was back in 2018 that TIM S.A. launched the very first commercial NB-IoT network in South America, to develop innovative services, aware that the mass introduction of the IoT can change the mobile telephony market considerably, because it leverages the creation of services and - amongst others - is a potential tool for agricultural uses, the connection of cars, traceability solutions and social-health care. In 2020, access to the NB-IoT network was extended.
Agrobusiness - Since 2018, together with Nokia and BR Digital, TIM S.A. has been focusing on agro-food potential in Brazil, offering connections in rural areas (not only for business applications but also for the digital inclusion of agrobusiness employees and residents of small towns). Since 2020, TIM has strengthened its position in relation to vertical agriculture, with the creation of the ConnectarAgro ecosystem (https:// conectaragro.com.br/) which brings together TIM S.A., solution providers for the agro segment and telecommunication solution providers.
5G -The commercial launch was announced by TIM S.A.'s CEO early 2020, during an on-line event attended by approximately 20,000 colleagues; the launch in Brazil involved three cities: Bento Gonçalves (RS), Itajubá (MG) and Três Lagoas (MS). The technology will be used to supply wireless residential broadband with FWA (Fixed Wireless Access) technology, exploiting the old frequencies of the 2G, 3G and 4G networks through dynamic spectrum sharing (DSS). In 2022, 5G SA was launched in all the Brazilian capitals, with TIM S.A. as the 5G coverage leader.
Connected Car - In 2021, the telemetry and connectivity solutions for Connected Car user services were developed for FCA (Fiat Chrysler Automotive), designed to support the advanced telemetry and FCA assistance services for its vehicles, as well as Wi-Fi connectivity and other added value services for FCA car owners. These are the first full digital services for connected cars available in Brazil.
Private Networks - In 2022 TIM started offering private networks, with edge core and Multi-Access Edge Computing (MEC) capabilities on the customer premises, allowing the deployment of high throughput, low-

latency, and high availability services on 5G. The first deployments will happen in 2023, in agribusiness and port logistics customers. Also in 2022, TIM ran a Proof of Concept with a customer in the automotive industry, successfully demonstrating an automated quality conformance use case.
LEO Satellites - In 2022 TIM evaluated the use of LEO satellite constellations as the backhaul of mobile access network sites, demonstrating the feasibility of this kind of architecture to solve remote site implementation issues.
Open RAN – Since 2020, TIM S.A., Telecom Infra Project (TIP) and Inatel launched the Open Field Program to leverage open and disaggregated solutions for the Radio Access Network (RAN). The program was postponed because of the Covid's pandemic, but the first field tests has started in 2022 at Inatel campus in Santa Rita do Sapucaí – MG. During this year, it was possible to validate two OEM vendors in 4G and 5G Open RAN technologies. The initiative will continue during 2023.
5G solutions through Cubo partnership – In October 2022, TIM Hub 5G was launched with demos (FWA, VR gaming, AR for Industry 4.0, 5G notebook, 360° necklace and camera), to promote and co-create with startups. Within Cubo Itaú, TIM Hub 5G allows the collaboration through an experimentation ecosystem where startups, customers, large companies, entrepreneurs, investors, and public institutions are connected by TIM's 5G to develop services, new solutions, and use cases in general. In November 2022, TIM Hub 5G in partnership with Stellantis, has started a call inviting startups to present agribusiness solutions that can be leveraged on 5G technology.

<u>Open Lab initiatives</u>
TIM S.A. joined the Telecom Infra Project (TIP) in 2017, an initiative founded by Facebook, SK Telecom, Deutsche Telekom, Nokia, Intel and other companies, which aims to create a new approach to building and implementing the telecommunications network infrastructure. TIM S.A. transformed TIM Lab into the first TIP Community Lab in Latin America, available to TIP members to create universal standards for solutions (initially transport networks, Open Optical Packet Transport working group), to overcome the challenges related to interoperability of different supplier products.
In 2018, TIM S.A. also joined a new working group within the TIP, together with Vodafone and Telefonica, called DCSG (Disaggregated Cell Site Gateway[1]). This project is an opportunity to define a common set of operator requirements and coordinate with companies that manufacture devices, which have wider and more flexible capacities and are cheaper; in June this year, the main functions of the solution were demonstrated with the help of Facebook, core EDGE suppliers and TIP members.
Finally, in 2020, TIM S.A. and the TIP partners completed their validation of the TSS (Total Site Solution), an inexpensive, unrestricted 4G NodeB solution, powered by solar energy and connected by satellite to the core TIM S.A. network, to be used in remote zones with low population density. During the year, TIM also adhered to the OpenRAN initiative with the OpenField project, to validate OpenRAN 4G and 5G solutions focused on the separation of hardware and software at a RAN level.

Human resources

Brazil

The Human Resources Executive Board, which has been renamed People, Culture and Organization Executive Board as of July 2022, is structured with the purpose of ensuring the best practices related to people management to support the evolution of the Company, aligned with technological transformations and business challenges, the commitment to sustainability and the appreciation of diversity and inclusion. In addition to always seeking the evolution of the work model, the construction of ecosystems for the continuous development of skills, the promotion of care and well-being for our employees in all dimensions.
Having an engaged team is essential to overcoming challenges and achieving better results. At TIM, the relationship of transparency and respect with all levels of the company strengthens our pride and sense of belonging, as well as a clarity as to the direction we are heading. These factors are differentiators in the development of our employer brand and employee experience.
In 2022, we had a (96%) participation in the Climate and Engagement Survey, confirming the consistency of this process as one of the most important means of listening to people and providing the opportunity to contribute toward the evolution of our company.
The result of the 2022 Climate and Engagement Survey was 86% (+3%), placing TIM 14% above the Global Telecom Market and 11% above the Mercer General Market, a consulting partner responsible for the survey methodology and application.
In 2022, we recorded growth in all 9 dimensions of the survey, with emphasis on Fair Reward (+8pp) and Healthy Environment (+5pp), which are ranked among the Best Practices according to the favorability achieved. Among the questions with the highest growth, those related to the Benefits offered (+19pp), Recognition (+9pp) and Balanced life (+7pp) stand out, in line with the action plan implemented in 2022, such

as the launch of the Wellbeing Connection program, the evolution of health care plans, among other initiatives.
The integrity culture remains the most recognized dimension, reaching a 90% favorability, with +2pp growth and needing a further 1pp to rank in the Best Practices market. Emphasis on the promotion of an inclusive environment (96% | +1pp) and an environment free of harassment and discrimination (94% | +3pp), thus corroborating the focus on Diversity & Inclusion and the strengthening of the Reporting Channel.
In 2023, we will continue implementing structured actions for the well-being of employees and readiness for change, through actions that favor organizational agility, aiming to maintain care for people and the search for innovation.

People
The Brazil BU ended the year 2022 with 9.406 employees across Brazil. These employees – with their histories and knowledge – represent the Company's intellectual capital and act as engines for business development.
Around 68,3% of our employees have a college degree or are currently attending college, and 9,4% have postgraduate degrees. The numbers and results show that TIM has a diversified and highly qualified staff to meet the Company's challenges. The workforce is rounded out by 237 interns and 141 young apprentices.

Development and Training
In 2022, TIM once again evolved in people development practices, focusing on digitization, customization, and inclusion.
Through surveys, benchmarking, and discussions with internal stakeholders, we evolved the performance management process to add even more value to our employees. Throughout the year 2022, three evaluation cycles were launched, involving over 5.600 people.
In July, we launched the first evaluation of peers/customers by project, opening the 2022 cycle with improvements in the experience of our internal customers.
At the end of 2022, we made further progress on improvements, bringing new elements beyond the skills to ensure a more comprehensive view of people: motivation and social reputation. In two years, we went from a process that reinforced an evaluative culture to building a culture of development and feedforward, with a fully customized, focused, and nimble process. In our people development strategy, we use the same assumptions: customization and added value. All learning practices and development programs are based on TIM's strategy, business priorities and the evolution of people's areas and skills.
For example, for leadership development, new editions of the E-Coaching and Intercompany Mentoring programs were launched, reaching over 270 leaders.
In the E-Coaching program, around 85 senior management leaders experienced a 5-session short-coaching digital journey with a certified coach and/or by the International Coaching Federation (ICF), with the purpose of accelerating their growth and facing their management challenges. So far, over 340 leaders have participated in this program since 2020.
Another relevant program was Intercompany Mentorship, in partnership with the "Positive Women" initiative. In this program, 193 female leaders from 23 different companies participated in the third wave of this innovative initiative, with the purpose of promoting reflection, awakening empowerment and accelerating the career development of women.
For Talent Management, we evolved in the design of a new model that segments the company into four large clusters: Strategic Talents, Leadership Talents, Professional Talents and Critical Knowledge Talents.
For senior leadership, we continue mapping the executives who will ensure the long-term continuity of the business. Another wave of the Top Executive Assessment in partnership with an external Leadership Advisory firm helped us mapping and accelerating the development of senior executives who will feed into the company's succession plan.
For middle management and professional talent, a new mapping cycle is planned for 2023 and will help us to have visibility of the key people who will feed the pipelines and make the difference in the areas.
For critical knowledge talent, over 300 people who work in New Capabilities were mapped this year. For them, retention, recognition, and education actions were prioritized, contributing to the reduction of turnover in this group.
In terms of education and learning initiatives, TIM's strategy and focus in 2022 was to support the evolution and transformation of the business based on the development of new skills through upskilling/reskilling programs.
To support and evolve with the Digital Learning process, we reformulated TIM Brasil's Education Model and launched TIM + Conhecimento, our Learning Hub that consolidates individual and collective journeys for employee learning on strategic business topics, such as mindset and digital skills, innovation, governance, customer experience, change management, among others. Since its launch, our portal reached 93,000 accesses.
TIM + Knowledge is composed of three fronts: Você + TIM, which aggregates everything an employee needs to know about our TIM: information on the organization, strategy and evolution of our business, ESG commitments, values and guidelines; Você na Frente (You Ahead), which adds everything an employee needs to be the professional of the future and leverage the development of his/her career; Você + TECH, which adds

everything an employee needs to develop the required skills and act with technical excellence in his/her area, promoting digital acceleration.
Furthermore, we strengthened Plural, an internal multiplication program that aims to support the process of developing essential technical and behavioral skills for the business. The program provides the protagonism of multiplier employees in the content creation and connects people in a learning network where knowledge sharing takes place in a strategic, democratic, customized and flexible way in topics such as Cloud, Agile, Data Strategy, CX, Digital Capabilities, Society Evolution, Digital Mindset, Institutional, Technique and Tools, among others. Through a recognition program, multipliers can score and exchange their points for educational actions and benefits, thus valuing their contributions to the business by sharing their knowledge and supporting the retention of these specialists in the company.
TIM also offered transversal initiatives such as:

- **New Working Model**: TIM formalized the process to allow continuous updating of alternative work models from a flexibility standpoint, in line with market innovations, transformations in the labor world and promotion of quality of life. It features the following models: face-to-face work regime (on-site), external field work (off-site), telework and work in a hybrid model (flex office/remote model). The hybrid work model (flex office/remote model) is defined as the company's current standard. The model of 3 days of face-to-face work and 2 days of remote work is adopted in office administrative activities, allowing employees to voluntarily choose to carry out 2 days of face-to-face work and 3 days of remote work per week, as needed by the area. Employees in areas with a specific type of activity/function previously identified by the company will be able to exercise their option of voluntary flexibility and carry out 1 day of face-to-face work per week and 4 remote days or 5 remote days, in line with the aforementioned typology and according to the need defined by the area (alignment with management). This topic has a dedicated project manager on the executive board to work on the continuous evolution of the model.
- **TIM Talks**: TIM's annual Training, Development and Communication Program. As of 2020, the event was attended by the internal and external public. Our purpose in 2022 was to leverage NEXT GENERATION TIM and increasingly position ourselves as protagonists of society's digital evolution, connecting and exploring all of its major challenges declared to the market. The event started in August with an opening ceremony and lasted until the end of November through several debates that focused on strategic topics for the sector, such as ESG, Technology, Customer Experience, Business Ecosystem and Transformation, a New Working Model. We had a total of 8 panels, which had the participation of important stakeholders, who were references in the topics addressed. All panels were fully broadcast on TIM's YouTube channel, open to all society, stressing our commitment to the democratization of knowledge and inclusion with more than 4.500 live participations and over 99.000 post-event views.

TIM also developed/supported customized learning journeys for the different areas based on different needs related to the aactivity. In all, 11 events were launched with over 840 people impacted in the different areas of the business.

Innovation Ecosystem and Talent Attraction

Based on the strategic plan and on the innovation targets, TIM reinforced the brand positioning in the innovation ecosystem and launched initiatives to promote the development of digital and technological skills of people in society, improve talent attraction and increase the effectiveness in professional acquisition.
To qualify technology professionals, we have established partnerships with big techs, innovation institutes and universities to develop relevant education and employability programs. We also intensified talent attraction strategies aimed at professionals with the new capabilities, strengthening our employer brand in the technology market.
As part of this strategy, TIM partnered with big techs, such as Google Cloud and Microsoft, to encourage and develop technology training, offer free professional courses and attract qualified people to our team. We also offer a technical knowledge journey for students and researchers from 5Girls, a project by Universidade Federal Fluminense (UFF) that encourages the study of 5G technology and the participation of women in technological careers.
We also participated in the most important events and innovation trade fairs, where we present our company and technology cases and make vacancies available for application. At Hacking Rio, the largest hackathon in Latin America with over 1.700 participants, we held a lecture and a challenge on the future of 5G, which was among the 10 finalists of the marathon. At the Sci Biz Conference, an important global science and business conference, TIM offered 5G experiences and promoted conferences on technology, in addition to cloud computing, agribusiness and data science.
Furthermore, we held roadshows and lectures at 10 universities for over 890 students, sharing technical knowledge aligned with TIM's business and career tips, converting 40% of students to the Internship Program website.
Our Internship and Young Apprentice programs are the major gateway for potential talent at TIM:
Internship Program: In September 2022, we launched another wave of the TIM Internship Program to hire talent for different areas, mainly in activities related to new skills and business evolution for the development

of digital skills. Through promotional actions on social networks and relationships with universities, we reached 11.970 applicants for 86 vacancies. The recruitment process was based on an interactive experience with a gamified business case, where candidates could learn more about TIM and 5G technology. The internship program maintains its characteristic of strengthening TIM's diversity and inclusion culture. This year, we had the challenge of attracting and hiring women for 50% of technology vacancies and we reached 61%. Overall, we reached 63% of selected women and reinforced TIM's commitment to the racial pillar, reaching 54% of black people. During the program, interns have a diversified and personalized development journey, with online courses, mentoring, job rotation and business challenges, so that they can exercise and develop skills that will help them achieve new results.
Young Apprentice Program: in 2022, we had 8.748 applicants for TIM's Young Apprentice opportunities. We hired 147 people between 18 and 24 years old across the country, who started their professional careers at TIM. The program has a strong social impact and is mainly aimed at people in situation of social vulnerability, with 65% of these new apprentices being black. This group's journey has both theory and practice, with vacancies available in administrative areas, stores and call centers. During the development journey, apprentices have the opportunity to learn the basic skills that will help them start their professional careers and prepare for future challenges.
In recruitment practices, we improved the way we advertise our job opportunities in 2022 to a format in line with market practices, using better job descriptions, requirements, and responsibilities. Moreover, we also started to give candidates visibility to all the benefits that make up TIM's Conecta Bem+Estar program, providing transparency, attractiveness, and engagement for opportunities. Such improvements are reflected in over 2,7 million views of our opportunities on talent attraction platforms (LinkedIn, Vagas.com and Success Factors). Following the evolution of the Recruitment processes, we also started the Project to implement a new Applicant Tracking System (ATS), enabling more intelligent tools based on data and artificial intelligence to increase agility and assertiveness in the recruitment processes, in addition to providing a more positive experience for candidates during the Recruitment and Selection journey.

Diversity and Inclusive Culture
Since the creation (in 2019) of an area dedicated to Diversity and Inclusion (D&I), TIM has been maintaining its efforts to disseminate a culture of respect and inclusion in the company and in Brazilian society, pursuant to its Diversity and Inclusion strategic plan and with the ESG Business Plan. Thus, the company creates a healthy work environment and gains a competitive advantage in the market.
In line with our Diversity and Inclusion strategies, we invested in hiring people with disabilities, reaching 62% of the Brazilian Legal Quota by August 2022, and we developed actions to hire minority groups such as transgender people, women, black people, and professionals aged 45 years or more.
In 2022, we maintained our 5 D&I pillars (Gender, Sexual orientation and gender identity, Race/Ethnicity, Generations, People with disabilities) and changed the name and performance of our area from People Caring & Inclusion Management to Ecosystem & Inclusion.
Furthermore, we implemented the Respect Generates Respect Program, which aims to combat violence, bullying and all types of harassment, establish a more inclusive culture in our company and in society through monthly training sessions and lives for all employees, including C-level and senior leadership, a new harassment policy, review of our processes, partnership with Avon Institute – the company that developed Angela, a WhatsApp chatbot that helps Brazilian women in situations of violence – and joining the Business Coalition to End Violence Against Women and Girls, an important business movement that fights against gender violence.
As a result of our continuous effort, TIM was recognized with several awards and diversity rankings in 2022:

- **Refinitiv Index**: 10th Company in the World considering the global market and, for the second consecutive year, 1st company in Brazil and 1st Telecommunications Company in the World by the Refinitiv Index, one of the most important D&I indexes at a global level.
- **TEVA Index**: 21st company in the Women on Board index and 14th company in the TEVA Women in Leadership Index, a national index that studies female representation in the leadership of Brazilian companies.
- **Bloomberg**: One of the 13 Brazilian companies recognized in Bloomberg's Gender Equality Index (GEI). The average score among the 418 recognized companies was 71%, and TIM obtained 80.29%.
- **WoB**: Recognition from Women on Board (Wob), a Brazilian initiative that certifies companies that have at least two women on their boards. TIM Brasil, in addition to being recognized by WoB, has 30% of women on its board.
- One of the 5 most sustainable companies in Latin America by the **Latin Trade IndexAmericas Sustainability Award**.
- **São Paulo Diversity Seal**: Recognition in the São Paulo Diversity Seal (Selo Paulista da Diversidade), an initiative of the Government of the State of São Paulo that recognizes Brazilian companies committed to inclusion.
- **Ethos**: One of the 72 companies recognized in the Diversity and Inclusion Survey, an initiative by the Ethos Institute and Época Negócios that recognizes Brazilian companies committed to inclusion.

- **Recognition as Innovative HR**: Think Work initiative that recognizes companies with the most innovative HR projects.
- **Diversity in Practice Award**: recognition of the Diversity in Practice Award, an initiative by Blend Edu that recognizes Brazilian companies committed to inclusion. TIM was recognized in the "Representativeness" category, due to the following programs: Positive Women (gender), Internship and Young Apprentice Programs (gender and race), Transforma TIM (LGBTI+), TIM 50+ (generations) and Crash Program (PCD).

Moreover, throughout 2022 and together with our Affinity Groups, other initiatives/actions were developed:

- Educational and communication campaigns were developed in line with the annual Diversity & Inclusion calendar.
- Our D&I Talks format, "TIM Convida"(TIM Invites), continues to promote a series of digital events, open to the whole society, with the objective of discussing current and main topics related to D&I, involving important speakers and guests. So far, the 2022 events have registered more than 28,000 views on TIM Brasil's YouTube.
- In addition, TIM continues to participate in some of the most important movements in the D&I ecosystem: UN Women; The Business Coalition for Race and Gender Equity, with a focus on the black population; Forum of Companies and LGBTI+ Rights, focusing on the LGBTI+ community, Forum of Generations, focusing on people over 45 years of age and Business Network for Social Inclusion (REIS), focusing on PCD.

Speaking about employability, TIM also continued the so-called "Chama pro TIMe" program, focused on minority groups, where all employees are invited to nominate candidates from these groups, and sponsored events for the employability of minority groups, such as Afro Presence, with a focus on inclusion of black students in the labor market and promoted by the Public Ministry of Labor and the UN Global Compact; Black Women Power, focusing on the inclusion of black women in technological areas; Diverse fair to include LGBTI+ people in the market.

Environmental, Social & Governance

According to art 1730-4 of Luxembourg law of 10 August 1915, as modified, Telecom Italia Finance Group is exempted from reporting the non financial information (the "NFRD Report") requested by art 1730 -1 of the same law. Indeed, all reportable undertakings under such report are covered by the NFRD report of TIM S.p.A., which fully controls Telecom Italia Finance.

Brazil

ESG Journey
TIM is a pioneer in ESG (Environmental, Social & Governance) topics in the Telecommunications sector in Brazil. The Company has been part of the B3 Sustainability Index Portfolio (ISE-B3) for 15 years, being the company in the sector that has been part of the Index for the longest time. In February 2023, TIM was once again recognized as one of the most sustainable companies in the world by S&P Global ESG, the organization responsible for the Dow Jones Sustainability Index (DJSI), and was included in the Sustainability Yearbook.
Since 2011, TIM has voluntarily been part of the Novo Mercado, the highest level of corporate governance on the Brazilian Stock Exchange, in addition to being the first and only telecommunications operator named as a Pro-Ethic company by the Brazilian Office of the Comptroller General (CGU) for two consecutive years.
As a signatory of the UN Global Compact since 2008 and UN Women since 2021, TIM develops projects connected to the Sustainable Development Goals (SDGs) and recognizes the rights to data privacy, secure internet, access to information and freedom of speech as essential and non-negotiable.
TIM has become a benchmark in the promotion of diversity and inclusion at national and international level, with targets, commitments, and implementation of several initiatives on gender, race, LGBTI+ people, generations, people with disabilities, among others. In 2021, the Company became the first Brazilian operator to integrate the Refinitiv Diversity & Inclusion Index, holding the 1st position in Telecom at a global level, a highlight that it also maintained in 2022. TIM was also the first operator to win the GSMA's Diversity in Tech international award, which recognizes worldwide organizations with practices in favor of equality, diversity, and human rights in the technology sector. In 2023, TIM continued to be part of the Bloomberg Gender Equality Index, which gathers 485 companies from 45 countries, and only 16 from Brazil.
Recognized with the Top Employers certification seal for the second consecutive year, TIM is also consolidated as one of the companies with the best HR practices. The certification is the result of an independent audit by the Top Employer Institute, an international institute with 30 years of experience in 120 countries. In January 2023, the Company also joined B3's GPTW Index, which considers companies certified by the Great Place to Work (GPTW) as the best work environments in Brazil.

TIM responds to the Carbon Disclosure Project (CDP) – the world's largest database on Greenhouse Gases related to Climate Change – since 2010 and records its emissions in the Public Emissions Registry of the Brazilian GHG Protocol Program.
Since 2004, TIM has been presenting its performance through sustainability indicators and it has been publishing reports in accordance with the guidelines of the Global Reporting Initiative (GRI) for 14 years. As of 2021, the Company started calling this publication the ESG Report and continues with its commitment to transparency and accountability to its stakeholders, organizing the report in the three pillars: Environmental, Social and Governance. The Report is also assured by an independent third party.
Our Policies on Social Responsibility, Human Rights, Diversity, Environment, Climate Change Management, Corporate Risk Management, Anti-Corruption, Relationship with Suppliers, Occupational Health and Safety, Privacy, among others, are publicly available for free consultation by our stakeholders.
In compliance with the General Data Protection Law, in force in Brazil since 2020, TIM works to ensure customer privacy, protect their personal data and maintain an increasingly transparent relationship. For further information, please consult the Privacy Center on the TIM website.
In 2013, TIM founded the TIM Institute with the mission of democratizing access to science, technology, and innovation to foster human development in Brazil. Over 700,000 people from all states and the Federal District have already benefited from the Institute's education and inclusion projects, including internationally awarded prizes (Governorte Award – IDB 2015).
Due to its sound performance in ESG, TIM integrates national and international indices and ratings, such as the Corporate Sustainability Index (ISE-B3), Carbon Efficient Index (ICO2-B3), Brazil ESG Index (S&P/B3), GPTW Index of B3, CDP Brazil Index of Climate Resilience (ICDPR-70), Refinitiv Diversity & Inclusion, Bloomberg's Gender Equality Index (GEI), FTSE4GOOD Emerging Markets, FTSE4GOOD Latin America, MSCI ACWI ESG Leaders, MSCI Emerging Markets ESG Leaders, Teva Women in Leadership Index, Women on Board seal, among others, in addition to being ISO 9001 (since 2000), ISO 14001 (since 2010) and ISO 37001 (since 2021) certified.

Events subsequent to December 31, 2022

Payment of Interest on Equity

In January 2023, TIM S.A paid Interest on Capital (IOC) related to the fiscal year ending on December 31, 2022 and approved on September 12,2022 and December 12, 2022 according to the following schedule:

Payment Date	Reais per share
31/01/2023	0,101211247
24/01/2023	0,187955005

For others details of subsequent events, see the specific Note "Events Subsequent to December 31, 2022".

Main risks and uncertainties

The majority of risks and uncertainty that impact financial markets and industrial arena are beyond the Group's control, therefore risk governance is considered a strategic tool for value creation.
In addition, there have been several major shifts, including, but not limited to, the change in the market environment, the entry of potential new competitors, the start of proceedings by Authorities, and the implementation of new business strategies in the multimedia segment. These risk factors may have unforeseeable repercussions in terms of the strategic choices adopted by the Group and could have an impact on the evolution model adopted in the multimedia market.
The main risks affecting the business activities of the TIF Group are presented below.

Strategic risks

Risks related to macro-economic factors
The Group's economic and financial situation is subject to the influence of numerous macroeconomic factors such as economic growth, political stability, consumer confidence, and changes in interest rates and exchange rates in the markets in which it operates.
For Brazil growth forecasts for 2022 have been raised, approaching 3%. In general, Brazil suffers the slow-down of the global economy, in particular the USA and China.
Also following a restrictive monetary policy that helped somewhat restore the credibility and stability of the Brazilian currency and limit inflation, a slowing of growth is expected for the Brazilian economy in 2023, which should settle at around 1%. The reduction in growth and the need to maintain subsidies for the poorer portion of the population, who are experiencing difficulty in coping with the rise in the cost of petrol and food products, coupled with the growing public and private debt are the main risks and challenges the country is facing following the presidential elections at the end of the year.

Risks related to competition
Competitive risks in the Brazilian market lie in the rapid transition of the business model tied to both traditional services and the more innovative ones. As the consumption patterns of the customer base change (migration from voice to data services), service providers need to act swiftly in upgrading their infrastructure and modernizing their portfolios of products and services. In this context, the TIM Brasil group could be impacted by the need for rapid development of technologies and infrastructures.

Operational risks

Operational risks inherent in our business relate, on one hand, to possible inadequacies in internal processes, external factors, frauds, employee errors, errors in properly documenting transactions, loss of critical or commercially sensitive data and failures in systems and/or network platforms; and on the other hand, to the possibility of implementing strategies for value creation through the optimization of costs and capital expenditure, which in part could depend on factors beyond the control of the Group, such as the cooperation of external counterparties (suppliers, trade unions, industry associations) and laws and regulations.

Cybersecurity risks
Cyber risk is on the increase worldwide and as such requires continual monitoring by the Group, given the sheer amount of IT assets managed in terms of own TLC infrastructure and assets necessary to deliver services to customers.
In view of these considerations, considerable attention was paid to protecting networks from main threats (e.g. viruses, malware, hackers, data theft). With a wide range of attackers (Cyber-Criminals, Cyber-Terrorists, Insiders, etc.), the Group carries out activities not only to safeguard its infrastructure but also – with a strong sense of responsibility – to protect customers' information assets, that are a priority target.
As regards prevention, the Group monitors cyber risk analyses, defining security plans for the company's IT assets, to identify the actions necessary to mitigate cyber risk in advance and guarantee a security by design approach, also monitoring the plans of these actions and controls on actual adoption in the field.
TIM has also implemented an insurance program to cover cyber risks.

Risks related to business continuity
The TIF Group's success depends heavily on the ability to ensure continuous and uninterrupted delivery of the products and services we provide through the availability of processes and the relating supporting assets. In particular, the Network Infrastructure and the Information Systems are sensitive to various internal and external threats: power outage, floods, storms, human errors, system failures, hardware and software failures, software bugs, cyber-attacks, earthquakes, facility failures, strikes, fraud, vandalism, terrorism, etc.
TIF, as part of the TIM Group, has adopted a "Business Continuity Model System" framework in line with international standards, to analyze and prevent these risks.

Risks related to the development of fixed and mobile networks
To maintain and expand our customer portfolio in the Brazilian market it is necessary to maintain, update and improve existing networks in a timely manner. A reliable and high-quality network is necessary to maintain the customer base and minimize terminations to protect the Group's revenues from erosion. The maintenance and improvement of existing installations depend on our ability to:

- deliver network development plans within the time-frames contemplated by business development plans and with the necessary level of effectiveness/efficiency;
- upgrade the capabilities of the networks to provide customers with services that are closer to their needs.

Risks of internal/external fraud
TIF Group, as part of the TIM Group, has an organizational model in place to prevent fraud. The organization is designed to ensure higher risk mitigation levels against illegal acts committed by people inside and outside the organization, which could adversely affect the Group's operating performance, financial position and image.

Risks related to disputes and litigation
TIF Group has to deal with disputes and litigation with tax authorities and government agencies, regulators, competition authorities, other telecommunications operators and other entities. The possible impacts of such proceedings are generally uncertain. In the event of unfavorable settlement for the Group, these issues may, individually or as whole, have an adverse effect, which may even be significant, on its operating results, financial position and cash flows.

Financial risks

TIF Group may be exposed to financial risks, such as risks arising from fluctuations in interest rates and exchange rates, credit risk, liquidity risk and risks related to the performance of the equity markets in general, and – more specifically – risks related to the performance of the share price of participations held by the Group. These risks may adversely impact the earnings and the financial structure of the Group. Accordingly, to manage those risks, the TIF Group has embedded guidelines defined at central level by TIM Group, which must be followed for operational management, identification of the most suitable financial instruments to meet set goals, and monitoring the results achieved. In particular, in order to mitigate the liquidity risk, the TIM Group aims to maintain an "adequate level of financial flexibility", in terms of cash and syndicated committed credit lines, enabling it to cover refinancing requirements at least for the next 12-18 months.
For further details of financial risks, see the specific Note "Financial risks management" .

Regulatory and compliance risks

Regulatory risks
The telecommunications industry is highly regulated. In this context, new decisions by Anatel may lead to changes in the regulatory framework that may affect the expected results of the Group.

Compliance risks
The TIF Group may be exposed to risks of non-compliance due to non-observance/breach of internal (self-regulation, such as, for example, bylaws, code of ethics) and external rules (laws, regulations, new accounting standards and Authority orders), with consequent judicial or administrative penalties, financial losses or reputational damage.
The TIF Group aims to ensure that processes, and, therefore, the procedures and systems governing them, and corporate conduct comply with legal requirements. The risk is associated with potential time lags in making the processes compliant with regulatory changes or whenever non-conformities are identified.

Group internal control and risk management

TIF Group adheres to the principles and criteria of the TIM Group Corporate Governance Code. Its Internal Control and Risk Management System consists of the set of rules, procedures and organizational structures applied to the entire TIM Group, which TIF Group is part of. This set allows the sound, fair and consistent operation of the Group in line with the pre-established objectives. At TIM Group level, the Internal Control and Risk Management System involves several components acting in a coordinated way accordingly to their respective responsibilities: the Board of Directors, with the responsibility to direct and provide strategic supervision; the Executive Directors and Management with the responsibility to control and manage; the Control and Risk Committee and the Head of the Group Audit Department, with the responsibility to monitor, control and provide support to the Board of Directors.

Information for investors

Brazil – shares

Regarding the trading of shares issued by Group companies on regulated markets, the ordinary shares of TIM S.A. are listed in Brazil on B3 (formerly BM&F/Bovespa).
Ordinary shares of TIM S.A. were also listed on the NYSE (New York Stock Exchange); share prices are set through ADS (American Depositary Shares) representing 5 ordinary shares of TIM S.A.

Waiver of the obligation to present activities in one report only

The Board of Directors of Telecom Italia Finance waived the provisions of art. 1720-1 (3) of the Luxembourg law dated as September 10, 2015, as modified by time to time, which allows the Board to present one report only where Consolidated Annual Report is prepared.

Alternative Performance Measures

In this Directors' Report and in the Consolidated Financial Statements of the Group for the year ended December 31, 2022, in addition to the conventional financial performance measures established by IFRS, certain alternative performance measures are presented for a better understanding of the trend of operations and financial condition. Such measures, which are also presented in interim financial reports, should, however, not be considered as a substitute for those required by IFRS.

- EBITDA/EBIT: these financial measures represent a useful unit of measurement for assessing the operating performance of the Group (considering in particular Brazil BU level). In order to get a more complete and effective understanding, they are also presented in terms of organic changes (amount and/or percentage), excluding, where applicable, the effects of the change in the scope of consolidation and exchange differences. EBITDA/EBIT are calculated as follows:

Profit (loss) before tax from continuing operations	
+	Finance expenses
-	Finance income
+/-	Other expenses (income) from investments
+/-	Share of profits (losses) of associates accounted for using the equity method
EBIT – operating profit (loss)	
+/-	Impairment losses (reversals) on non-current assets
+/-	Losses (gains)on disposals of non-current assets
+	Depreciation and amortization
EBITDA – Operating profit(loss) before depreciation and amortization, Capital gains (losses) and impairment reversal (losses) on non-current assets	

- EBITDA margin and EBIT margin: Telecom Italia Finance believes that these margins represent useful indicators of the ability of the Group (and in particular the Brazil BU) to generate profits from its revenues. In fact, EBITDA margin and EBIT margin measure the operating performance of an entity by analysing the percentage of revenues that are converted, respectively, into EBITDA and EBIT.

- Capital Expenditures ("Capex"): Telecom Italia Finance considers Capex as relevant measures to understand the Group investments in intangible and tangible nun-current assets. The amount presented corresponds to the sum of columns "addition" in Note "Intangible assets with a finite useful life" and Note "Tangible assets".

- Net financial debt: Telecom Italia Finance believes that Net Financial Debt represents an accurate indicator of its ability to meet its financial obligations. It is represented by Gross Financial Debt less Cash and Cash Equivalents and other Financial Assets. The Directors' Report includes a table showing the amounts taken from the statements of financial position and used to calculate the Net Financial Debt of the Group, divided by operating segment. In addition, Note "Net Financial Debt" details the calculation for the Group.

- ARPU: The Group uses Average Revenue Per User (ARPU) as metric to understand the revenue generation capability and growth at the per-customer level. It is equivalent to the total revenue divided by average users number during a period.

Corporate Governance Statement

A description of the Parent Corporate Governance is provided within the statutory accounts of Telecom Italia Finance, available at www.tifinance.lu.

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Consolidated Statements of Financial Position
Assets

(millions of euros)	Note	31/12/2022	31/12/2021
Non-current assets			
Intangible assets		**3.312**	**1.996**
Goodwill	[5]	977	443
Intangible assets with a finite useful life	[6]	2.334	1.552
Tangible assets	[7]	**2.147**	**1.691**
Property, plant and equipment		2.147	1.691
Right of use assets	[8]	**1.981**	**1.253**
Other non-current assets		**2.759**	**2.658**
Investments	[9]	277	254
Non-current financial receivables for lease contracts	[10]	37	34
Other non-current financial assets	[10]	1.669	1.893
Miscellaneous receivables and other non-current assets	[11]	531	393
Deferred tax assets	[12]	246	85
Total Non-current assets		**10.199**	**7.598**
Current assets			
Inventories	[13]	42	32
Trade and miscellaneous receivables and other current assets	[14]	865	832
Current income tax receivables	[12]	105	26
Current financial assets	[10]	**4.656**	**5.628**
Current financial receivables arising from lease contracts		6	5
Securities other than investments, financial receivables and other current financial assets		1.609	2.377
Cash and cash equivalents		3.042	3.247
Total Current Assets		**5.669**	**6.518**
TOTAL ASSETS		**15.868**	**14.117**

The accompanying notes are an integral part of these annual accounts.

Equity and Liabilities

(million euros)	Note	31/12/2022	31/12/2021
Equity			
Share capital issued	[15]	1.819	1.819
Other reserves and retained earnings (accumulated losses), including profit (loss) for the year		4.547	4.118
Equity attributable to owners of the Parent		**6.366**	**5.937**
Non-controlling interests	[3]	**1.545**	**1.345**
TOTAL EQUITY		**7.911**	**7.282**
Non-current liabilities			
Non-current financial liabilities for financing contracts and others	[16]	2.330	2.397
Non-current financial liabilities for lease contracts	[16]	1.900	1.233
Deferred tax liabilities	[12]	—	—
Provisions	[21]	252	157
Miscellaneous payables and other non-current liabilities	[22]	179	118
Total Non-current liabilities		**4.661**	**3.905**
Current liabilities			
Current financial liabilities for financing contracts and others	[16]	1.235	1.343
Current financial liabilities for lease contracts	[16]	406	201
Trade and miscellaneous payables and other current liabilities	[23]	1.641	1.356
Current income tax payables	[12]	14	30
Total Current Liabilities		**3.296**	**2.930**
TOTAL LIABILITIES		**7.957**	**6.835**
TOTAL EQUITY AND LIABILITIES		**15.868**	**14.117**

The accompanying notes are an integral part of these annual accounts.

Separate Consolidated Income Statements

(million euros)	Note	31/12/2022	31/12/2021
Revenues	[25]	3.963	2.840
Other operating income	[26]	17	13
Total operating revenues and other income		**3.980**	**2.853**
Purchase of goods and services	[27]	-1.568	-1.039
Employee benefits expenses	[28]	-312	-238
Other operating expenses	[29]	-372	-287
Change in inventories		6	-7
Internally generated assets	[30]	93	72
Operating profit before depreciation and amortization, capital gains (losses) and impairment reversals (losses) on non-current assets (EBITDA)		**1.828**	**1.355**
Depreciation and amortization	[31]	-1.260	-895
Gains/(losses) on disposals of non-current assets	[32]	13	6
Operating profit (loss) (EBIT)		**581**	**466**
Share of profits (losses) of equity investments valued using equity method		-11	-2
Other income (expenses) from investments	[33]	-3	120
Finance income	[34]	920	707
Finance expenses	[34]	-1.233	-816
Profit (loss) before tax from continuing operations		**254**	**476**
Income tax expenses	[12]	-32	-39
PROFIT (LOSS) FOR THE YEAR		**221**	**437**
Attributable to			
Owners of the Parent		120	282
Non-controlling interests		102	155

The accompanying notes are an integral part of these annual accounts.

Consolidated Statements of Comprehensive Income

(millions of euros)	Note	31/12/2022	31/12/2021
Profit (loss) for the year	**(a)**	**221**	**437**
Other components that subsequently will not be reclassified to the Separate Consolidated Income Statements	**(b=c)**	**—**	**10**
Financial assets measured at fair value through other comprehensive income:	**(c)**	**—**	**10**
Profit (loss) from fair value adjustments		—	10
Other components that subsequently will be reclassified to the Separate Consolidated Income Statements	**(d=e+f+g)**	**542**	**20**
Financial assets measured at fair value through other comprehensive income:	**(e)**	**-50**	**-18**
Profit (loss) from fair value adjustments		-70	-12
Loss (profit) transferred to the Separate Consolidated Income Statements		20	-6
Hedging derivative instruments:	**(f)**	**—**	**—**
Profit (loss) from fair value adjustments		—	—
Loss (profit) transferred to the Separate Consolidated Income Statements		—	—
Exchange rate differences on translating foreign operations:	**(g)**	**592**	**38**
Profit (loss) on translating foreign operations		592	38
Other components of the Consolidated Statements of Comprehensive Income	**(h=b+d)**	**542**	**30**
Total comprehensive income (loss) for the year	**(i=a+h)**	**763**	**467**
Attributable to			
Owners of the Parent		479	300
Non-controlling interests		284	167

The accompanying notes are an integral part of these annual accounts.

Consolidated Statements of Changes in Equity

Changes from January 1, 2022 to December 31, 2022

(millions of euros)	Share capital	Additional paid in capital	Reserve for financial assets measured at fair value through other comprehensive income	Reserve for hedging instruments	Reserve for exchange differences on translating foreign operations	Reserve for remeasurements of employee defined benefit plans (IAS 19)	Share of other profits (losses) of associates and joint ventures accounted for using the equity method	Other reserves and retained earnings (accumulated losses), including profit (loss) for the period	**Total Equity attributable to owners of the Parent**	**Non-controlling interests**	**Total equity**
Balance at January 01, 2022	**1.819**	**3.148**	**-6**	**2**	**-2.523**	**—**	**—**	**3.498**	**5.937**	**1.345**	**7.282**
Changes in equity during the period:											
Dividends approved	—	—	—	—	—	—	—	-54	-54	-85	**-140**
Total comprehensive income (loss) for the period	—	—	-50	—	409	—	—	120	479	284	**763**
Other changes	—	—	—	—	—	—	—	4	4	2	**6**
Balance at December 31, 2022	**1.819**	**3.148**	**-56**	**2**	**-2.114**	**—**	**—**	**3.568**	**6.366**	**1.545**	**7.911**

Changes from January 1, 2021 to December 31, 2021

(millions of euros)	Share capital	Additional paid in capital	Reserve for financial assets measured at fair value through other comprehensive income	Reserve for hedging instruments	Reserve for exchange differences on translating foreign operations	Reserve for remeasurements of employee defined benefit plans (IAS 19)	Share of other profits (losses) of associates and joint ventures accounted for using the equity method	Other reserves and retained earnings (accumulated losses), including profit (loss) for the period	**Total Equity attributable to owners of the Parent**	**Non-controlling interests**	**Total equity**
Balance at January 01, 2021	**1.819**	**3.148**	**-459**	**1**	**-2.549**	**-1**	**—**	**4.111**	**6.070**	**1.233**	**7.303**
Changes in equity during the period:											
Dividends approved [*]	—	—	—	—	—	—	—	-436	**-436**	-54	**-490**
Transfer of cumulated result for disposal of TIM shares [**]	—	—	462	—	—	—	—	-462	**—**	—	**—**
Total comprehensive income (loss) for the period	—	—	-8	1	26	—	—	282	**300**	167	**467**
Other changes	—	—	—	—	—	—	—	3	**3**	—	**3**
Balance at December 31, 2021	**1.819**	**3.148**	**-6**	**2**	**-2.523**	**—**	**—**	**3.498**	**5.937**	**1.345**	**7.282**

[*] This item includes an interim dividend that the Board of Directors of TI Finance resolved to distribute on November 23, 2021 in the amount of 384,1 million euros, partly in kind and partly cash by using the non-distributed profit of year 2009 to 2014. According to such resolution, on November 26, 327,2 million euros were paid cash. The amount in kind has been paid distributing all the no. 126.082.374 TIM S.p.A. ordinary shares in portfolio, for a countervalue of 56,9 million euros.
[**] The shares of TIM S.p.A. have been entirely distributed on November 23, 2021 to TIM S.p.A. by TI Finance as interim dividend in kind. The shares in portfolio has been valued at the market price of the day preceding the Board resolution, realizing a gain of 9,3 million euros. As permitted by IFRS 9, the Group measured Other Investments at fair value through other comprehensive income (FVTOCI), as a consequence the gain has not been reversed to the Separate Consolidated Income Statement and the cumulated result has been transferred to retained earnings.

The accompanying notes are an integral part of these annual accounts.

Consolidated Statements of Cash Flows

(million euros)	Note	31/12/2022	31/12/2021
Cash Flows from operating activities:			
Profit (loss) from continuing operations		221	437
Adjustments for:			
Depreciation and amortisation	[31]	1.260	895
Impairment losses(reversals) of non-current assets (including investments)		18	-6
Net change in deferred tax assets and liabilities	[12]	-24	54
Losses (gains) realised on disposal of non-current assets (including investments)	[32] [33]	-13	-125
Change in inventories		-6	7
Change in trade receivables and net amounts due from customers on construction contracts	[14]	-6	-17
Change in trade payables		130	5
Net change in current income tax receivables/payables	[12]	-95	24
Net changes in miscellaneus receivables/payables and other assets/liabilities		296	146
Cash flows from (used In) operating activities		**1.782**	**1.420**
Cash Flows from investing activities:			
Total purchase of intangible and tangible assets and right of use on a cash basis		-1.166	-796
Change in financial receivables and other financial assets	[10]	867	-1.188
Acquisition of control of companies or other businesses, net of cash acquired	[4]	-1.316	—
Collection on sale of equity investments in subsidiaries net value	[33]	—	172
Proceed from sale/repayment of intangible, tangible and other non-current assets		2	1
Cash flows from (used In) investing activities		**-1.614**	**-1.811**
Cash Flows from financing activities:			
Changes in current financial liabilities and other	[16]	-292	887
Proceeds from non-current financial liabilities (including current portion)	[16]	474	618
Repayments of non-current financial liabilities (including current portion)	[16]	-406	-455
Changes in derivatives		-29	16
Dividends paid		-122	-431
Changes in ownership interests in consolidated subsidiaries		—	—
Cash flows from (used In) financing activities		**-376**	**635**
Aggregate Cash flows		**-208**	**244**
Net foreign exchange differences on net cash and cash equivalents		**-45**	**6**
Net cash and cash equivalents at the beginning of the year	**[10]**	**3.239**	**2.995**
Net cash and cash equivalents at the end of the year	**[10]**	**3.031**	**3.239**

Additional Cash Flow Information

(million euros)	31/12/2022	31/12/2021
Income taxes (paid) received	-17	-16
Interest expense paid	-523	-372
Interest income received	349	257
Dividends received	—	1

The accompanying notes are an integral part of these annual accounts.

Notes to the Consolidated Financial Statements

Note 1 - Form, content and other general information

FORM AND CONTENT

Telecom Italia Finance S.A. (the “Parent” or “TIF”) is established in Luxembourg as Société Anonyme under the laws of the Grand Duchy of Luxembourg. The registered office is located at 12, rue Eugène Ruppert, Luxembourg. Parent and its subsidiaries are collectively referred to as the “Group” or “TIF Group”.

The immediate and ultimate Parent of the Group is TIM S.p.A.

The Group, through its Brazilian’s subsidiaries, is principally engaged in providing fixed-line and telephony services to the public. The Group is also involved in providing financial assistance and loans to the ultimate Parent of the Group and its subsidiaries.

The Consolidated Financial Statements 2022 of the Group have been prepared in accordance with the International Financial Reporting Standards issued by the International Accounting Standards Board as endorsed by EU ("IFRS") and were authorized for issue with a resolution of the Board of Directors on March 10, 2022. The Consolidated Financial Statements 2022 are subject to approval by the shareholders meeting.

The consolidated financial statements have been prepared under the historical cost convention, except for financial assets, which are measured at the fair value recognized in the other components of the comprehensive income, financial assets measured at fair value through the income statement, and derivative financial instruments, which have been measured at fair value.
In accordance with IAS 1 (Presentation of Financial Statements) comparative information included in the consolidated financial statements is, unless otherwise indicated, related to the previous year.

The Consolidated Financial Statements 2022 have been prepared on a going concern basis (for further details see Note "Accounting policies").

The Consolidated Financial Statements 2022 are expressed in euro (rounded to the nearest million, unless otherwise indicated).

FINANCIAL STATEMENT FORMATS

The financial statement formats adopted are consistent with those indicated in IAS 1. In particular:

- the Consolidated Statement of Financial Position has been prepared by classifying assets and liabilities according to the "current and non-current" criterion;
- the Separate Consolidated Income Statement has been prepared by classifying operating costs by nature of expense as this form of presentation is considered more appropriate and representative of the specific business of the Group, conforms to internal reporting and is in line with the Group's industrial sector;
- the Consolidated Statement of Comprehensive Income includes the profit or loss for the year as shown in the Separate Consolidated Income Statement and all other changes in equity related to non-controlling interests;
- the Consolidated Statement of Cash Flows has been prepared by presenting cash flows from operating activities according to the "indirect method", as permitted by IAS 7 (Statement of Cash Flows).

Furthermore, according to IAS 1 (paragraphs 97 and 98), certain expense and income items that are material in terms of nature and amount are separately disclosed in the notes to the separate consolidated income statement. Specifically, such items include, for instance: income/expenses arising from the sale of property, plant and equipment, business segments and investments; expenses stemming from company reorganization and streamlining processes and projects, also in connection with corporate transactions (mergers, spin-offs, etc.); expenses resulting from litigation and regulatory sanctions and related liabilities; other provisions for risks and charges and related reversals; costs for the settlement of disputes other than regulatory disputes; adjustments, realignments and other non-recurring items, also relating to previous years; impairment losses on goodwill and/or other intangible and tangible assets.

The official version of the consolidated financial statements is the ESEF version available at the Officially Appointed Mechanism (OAM) at the bourse of Luxembourg (https://www.bourse.lu/oam).

SEGMENT REPORTING

An operating segment is a component of an entity:
- that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the same entity);
- whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance; and
- for which separate financial information is available.

In particular, the operating segments of the Group are organized according to the specific businesses.
The term operating segment is considered synonymous with Business Unit.

The operating segments of the Group are as follows:
- Telecommunications (or Brazil Business Unit): includes mobile and fixed telecommunications operations in Brazil;
- Other Operations: includes TI Finance, that provides financial assistance to TIM Group companies.

For these Business Units, the Group has identified Chief Operating Decision Makers (CODMs) within the directors for each segment.

Note 2 - Accounting Policies

GOING CONCERN

The Consolidated Financial Statements 2022 have been prepared on a going concern basis as there is the reasonable expectation that the Group will continue conducting its business in the foreseeable future (and in any event over a period of at least twelve months).
In particular, the following factors have been taken into consideration:
- the main risks and uncertainties (that are for the most part of an external nature) to which the Group and the various activities of the Group are exposed:
  - variations in business conditions, also related to competition;.
  - financial risks (interest rate and/or exchange rate trends, changes in the Group's credit rating by rating agencies);
  - changes in the general macroeconomic situation in the Italian, European and Brazilian markets, as well as the volatility of the financial markets deriving from the risks of recession and inflation linked to both the continuation of COVID-19 and its possible variants and the increase in the cost of commodities and energy, also following the Russian invasion of Ukraine;
  - changes in the legislative and regulatory context (changes in prices and tariffs or decisions that may influence technological choices) and the outcome of the legal and regulatory authority proceedings.
- the optimal mix between risk capital and debt capital;
- the policy for financial risk management (market risk, credit risk and liquidity risk), as described in the Note "Financial risk management" .

Based on these factors, the Management believes that, at the present time, there are no elements of uncertainty regarding the Group's ability to continue as a going concern.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the financial statements of all subsidiaries from the date on which control over such subsidiaries commences until the date on which control ceases.
The date of all the subsidiaries' financial statements coincides with that of the Parent.
Control exists when the Parent has all the following:
- decision-making power over the investee, which includes the ability to direct the relevant activities of the investee, i.e. the activities that significantly affect the investee's returns;
- entitlement to the variable profits or losses commensurate with its shareholding in the investee;
- the ability to use its decision-making to determine the amount of the returns relating to its shareholding in the entity.

The Parent reassesses whether it controls an investee if facts and circumstances indicate that there are changes in one or more of the three control elements.
In the preparation of the Consolidated Financial Statements,the global amounts of the assets, liabilities, costs and revenues of the consolidated companies are recognized on a line-by-line basis, while the share of equity and the year's result of non-controlling interest is recognized and is disclosed separately under appropriate

items in the Consolidated Statements of Financial Position, in the Separate Consolidated Income Statement and in the Consolidated Statements of Comprehensive Income.
Under IFRS 10 (Consolidated financial statements), the comprehensive loss (including the profit or loss for the year) is attributed to the owners of the parent and to non-controlling interests even when the equity of non-controlling interest has a deficit balance.
All intragroup balances and transactions and any gains and losses arising from intragroup transactions are eliminated in consolidation.
The carrying amount of the investment in each subsidiary is eliminated against the corresponding share of equity in each subsidiary, after adjustment, if any, to fair value at the date of acquisition of control. At that date, goodwill is recorded as an intangible asset, as described below, whereas any profit from a bargain purchase (or negative goodwill) is recognized in the separate consolidated income statement.
All the assets and liabilities expressed in currencies other than euro of foreign consolidated entities that are included in the consolidation are translated using the exchange rates in effect at the reporting date (the current exchange rate method), while the related revenues and costs are translated at the average exchange rates for the year. Exchange differences resulting from the application of this method are classified as equity until the entire disposal of the investment or upon loss of control of the foreign subsidiary. Upon partial disposal, without losing control, the proportionate share of the cumulative amount of exchange differences related to the disposed interest is recognized in non-controlling interests.
The cash flows of foreign consolidated subsidiaries expressed in currencies other than euro included in the consolidated statement of cash flows are translated into euro at the average exchange rates for the year.
Goodwill and fair value adjustments arising from the allocation of the purchase price of a foreign entity are recorded in the relevant foreign currency and are translated using the year-end exchange rate.
Under IFRS 10, changes in a parent's ownership interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions. In such circumstances the carrying amounts of controlling and non-controlling interests shall be adjusted to reflect the changes in their related interests in the subsidiary. Any difference between the amount by which the non-controlling interest is adjusted and the fair value of the consideration paid or received shall be recognized directly in equity and attributed to the owners of the Parent.
Under IFRS 10, the parent company in case of loss of control of a subsidiary:

- derecognizes:
    - the assets (including any goodwill) and the liabilities;
    - the carrying amount of any non-controlling interest;
- recognizes:
    - the fair value of any consideration received;
    - the fair value of any residual investment retained in the former subsidiary;
    - any profit or loss resulting from the transaction, in the separate consolidated income statement;
    - the reclassification to the separate consolidated income statement of the amounts previously recognized in other comprehensive income in relation to the subsidiary.

In the Consolidated Financial Statements, investments in associates are accounted for using the equity method, as provided by IAS 28 (Investments in Associates and Joint Ventures).
Associates are enterprises in which the Group holds at least 20% of the voting rights or exercises significant influence, but no control or joint control over their financial and operating policies.
Associates are included in the Consolidated Financial Statements from the date on which significant influence commences until the date on which significant influence ceases. Under the equity method, on initial recognition the investment in an associate is recognized at cost, and the carrying amount is increased or decreased to recognize the investor's share of the profit or loss of the investee after the date of acquisition. The investor's share of the investee's profit or loss is recognized in the separate consolidated income statement. Dividends received from an investee reduce the carrying amount of the investment.
After application of the equity method, the Group determines whether it is necessary to recognize an impairment loss on its investment. At each reporting date, the Group determines whether there is objective evidence that the investment in the associate is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate and its carrying value, and then recognizes the loss within Separate Consolidated Income Statement .
Adjustments to the carrying amount may also be necessary for changes in the investee's other comprehensive income (i.e. those arising from foreign exchange translation differences). The investor's share of those changes is recognized in the investor's other comprehensive income.
If an investor's share of losses of an associate equals or exceeds its interest in the associate, the investor discontinues recognizing its share of further losses. After the investor's interest is reduced to zero, additional losses are provided for, and a liability is recognized, only to the extent that the investor has incurred legal or constructive obligations or made payments on behalf of the associate. If the associate subsequently reports profits, the investor resumes recognizing its share of those profits only after its share of the profits equals the share of losses not recognized.
Any other long-term interests (some types of preference shares and long-term loans) in an associate or joint venture are measured in accordance with IFRS 9.

Gains and losses resulting from "upstream" and "downstream" transactions between an investor (including its consolidated subsidiaries) and its associate are recognized in the investor's financial statements only to the extent of unrelated investors' interests in the associate.
The investor's share of profits and losses of the associate arising from said transactions is eliminated.

INTANGIBLE ASSETS

Goodwill
The goodwill recorded in the Consolidated Financial Statements of the Group refers to the goodwill which was generated in connection with the acquisition of the Brazilian Business Unit.
In accordance with IFRS 3 (Business Combinations), goodwill is recognized in the financial statements at the date of acquisition of control of a business and is determined as the excess of (a) over (b), as follows:

a) the aggregate of:
    - the consideration transferred (measured in accordance with IFRS 3; it is generally recognized on the basis of the fair value at the acquisition date);
    - the amount of any non-controlling interest in the acquiree measured proportionally to the non-controlling interest share of the acquiree's identifiable net assets shown at the related fair value;
    - in a business combination achieved in stages, the acquisition date fair value of the acquirer's previously held equity interest in the acquiree;

b) the fair value of the identifiable assets acquired net of the identifiable liabilities assumed measured at the date of acquisition of control.

IFRS 3 requires, *inter alia*, the following:

- incidental costs incurred in connection with a business combination to be charged to the Separate Consolidated Income Statement;
- in a business combination achieved in stages, the acquirer to remeasure its previously held equity interest in the acquiree at its fair value at the acquisition date of control and recognize the resulting gain or loss, if any, in the Separate Consolidated Income Statement.

Goodwill is classified in the statement of financial position as an intangible asset with an indefinite useful life.
Goodwill initially recognized is subsequently reduced only by cumulative impairment losses (for more details, see the section "Impairment of intangible assets, tangible assets and rights of use assets - Goodwill", below). In case of loss of control of a subsidiary, the related amount of goodwill is taken into account in calculating the gain or loss on disposal.

Development costs
Costs incurred internally for the development of new products and services represent either intangible assets (mainly costs for software development) or tangible assets. These costs are capitalized only when all the following conditions are satisfied: i) the cost attributable to the development phase of the asset can be measured reliably, ii) there is the intention, the availability of financial resources and the technical ability to complete the asset and make it available for use or sale and iii) it can be demonstrated that the asset will be able to generate future economic benefits. Capitalized development costs comprise only incurred expenditures that can be attributed directly to the development process for new products and services.
Capitalized development costs are amortized systematically over the estimated product or service life so that the amortization method reflects the way in which the asset's future economic benefits are expected to be consumed by the entity.

Other intangible assets with a finite useful life
Other purchased or internally-generated intangible assets with a finite useful life are recognized as assets, in accordance with IAS 38 (Intangible Assets), when the use of the asset is likely to generate future economic benefits and when the cost of the asset can be reliably measured.
Such assets are recorded at purchase or production cost and amortized on a straight-line basis over their estimated useful lives; the amortization rates are reviewed annually and revised if the current estimated useful life is different from that estimated previously. The effect of such changes is recognized prospectively in the Separate Consolidated Income Statement.

TANGIBLE ASSETS

Property, plant and equipment
Property, plant and equipment are recognized at purchase or production cost. Subsequent expenditures are capitalized only if they increase the future economic benefits embodied in the related item of property, plant and equipment. All other expenditures are recognized in the Separate Consolidated Income Statement as incurred.

The cost of these assets also includes the expected costs of dismantling the asset and restoring the site, if a legal or constructive obligation exists. The corresponding liability is recognized at its present value in a provision for risks and charges in the liabilities. The recognition in the separate consolidated income statement of the capitalized expenditure is done over the useful life of the related tangible assets through their depreciation.
The calculation of estimates for dismantling costs, discount rates and the dates in which such costs are expected to be incurred is reviewed annually at each financial year-end. Changes in the above liability must be recognized as an increase or decrease of the cost of the related asset; the amount deducted from the cost of the asset must not exceed its carrying amount. The excess, if any, is recorded immediately in the Separate Consolidated Income Statement, conventionally under the line item "Depreciation".
Depreciation is calculated on a straight-line basis over the estimated useful life of the assets.
Depreciation rates are reviewed annually and revised if the current estimated useful life is different from that estimated previously. The effect of such changes is recognized prospectively in the Separate Consolidated Income Statement.
Land, including land pertaining to buildings, is not depreciated.

RIGHT OF USE ASSETS

In accordance with IFRS 16, lease liabilities are presented through the recognition of a financial liability in the statement of financial position consisting in the present value of future lease payments, against the recognition of the right of use of the leased asset.
On the commencement date of the lease, the right of use is recognized at cost including: the amount of the initial measurement of the lease liability, any lease payments made at or before the commencement date, initial direct costs incurred for the signature of the lease and the present value of the estimated restoration and dismantling costs set out in the lease, less any incentives.
Subsequently, the right of use is amortized over the term of the lease (or the useful life of the asset, if lower), subject to impairment and adjusted for any remeasurement of the lease liability.
It is specified that starting January 1, 2021, the Group has attracted, under the scope of application of IFRS 16, if the criteria and the requirements laid down by the standard are met, the new contract types concerning cloud software resources and the spectrum of transmission frequencies on optic fiber carriers. This approach is functional to the very innovative specificity of these types of contract, concerning hardware infrastructure and optical transmission as well as technologically-advanced software services.

CAPITALIZED BORROWING COSTS

Under IAS 23 (Borrowing Costs), the Group capitalizes borrowing costs only if they are directly attributable to the acquisition, construction or production of an asset that takes a substantial period of time (conventionally more than 12 months) to get ready for its intended use or sale.
Capitalized borrowing costs are recorded in the Separate Consolidated Income Statement and deducted directly from the "finance expense" line item to which they relate.

IMPAIRMENT OF INTANGIBLE, TANGIBLE AND RIGHT OF USE ASSETS

Goodwill

Goodwill is tested for impairment at least annually or more frequently whenever events or changes in circumstances indicate that goodwill may be impaired, as set forth in IAS 36 (Impairment of Assets); however, when the conditions that gave rise to an impairment loss no longer exist, the original amount of goodwill is not reinstated.
The test is generally conducted at the end of every year, so the date of testing is the year-end closing date of the financial statements. Goodwill acquired and allocated during the year is tested for impairment at the end of the year in which the acquisition and allocation took place.
For the purpose of verifying its recoverability, goodwill is allocated, from the acquisition date, to each of the cash-generating units, or groups of cash-generating units, that is expected to benefit from the combination.
If the carrying amount of the cash-generating unit (or group of cash-generating units) exceeds the recoverable amount, an impairment loss is recognized in the Separate Consolidated Income Statement. The impairment loss is first recognized as a deduction of the carrying amount of goodwill allocated to the cash-generating unit (or group of cash-generating units) and only subsequently applied to the other assets of the cash-generating unit in proportion to their carrying amount, up to the recoverable amount of the assets with a finite useful life.
The recoverable amount of a cash-generating unit (or group of cash-generating units) to which goodwill is allocated is the higher between the fair value less costs to sell and its value in use.
The fair value net of disposal costs is estimated on the basis of the income approach, insofar as this allows for the reflection of the benefits deriving from a new, different business structure in the future. In particular, the fair value net of disposal costs is based on the current value of the forecast cash flow, applying a discounting rate that reflects current market assessments of the time value of money and the risks specific to the asset.

The future cash flows are those arising from an explicit time horizon between three and five years, as well as those extrapolated to estimate the terminal value.
In calculating the value in use, the estimated future cash flows are discounted to present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. The future cash flows are those arising from an explicit time horizon between three and five years as well as those extrapolated to estimate the terminal value. The long-term growth rate used to estimate the terminal value of the cash-generating unit (or group of cash-generating units) is assumed not to be higher than the average long-term growth rate of the segment, country or market in which the cash-generating unit (or group of cash-generating units) operates.
The value in use of cash-generating units denominated in foreign currency is estimated in the local currency by discounting cash flows to present value on the basis of an appropriate rate for that currency. The present value obtained is translated to euro at the spot rate on the date of the impairment test (in the case of the Group, the closing date of the financial statements).
Future cash flows are estimated by referring to the current operating conditions of the cash generating unit (or group of cash-generating units) and, therefore, do not include either benefits originating from future restructuring for which the entity is not yet committed, or future investments for the improvement or optimization of the cash-generating unit.
For the purpose of calculating impairment, the carrying amount of the cash-generating unit is established based on the same criteria used to determine the recoverable amount of the cash generating unit, excluding surplus assets (that is, financial assets, deferred tax assets and net non-current assets held for sale) and includes the goodwill attributable to non-controlling interests.
After conducting the goodwill impairment test for the cash-generating unit (or groups of cash-generating units), a second level of impairment testing is carried out which includes the corporate assets which do not generate positive cash flows and which cannot be allocated by a reasonable and consistent criterion to the single units. At this second level, the total recoverable amount of all cash-generating units (or groups of cash-generating units) is compared to the carrying amount of all cash-generating units (or groups of cash-generating units), including also those cash-generating units to which no goodwill was allocated, and the corporate assets.

Intangible and tangible assets with finite useful lives and right of use assets
At the end of each reporting period, the Group assesses whether there is any indication that an asset – whether tangible or intangible with finite useful lives or a right-of-use – may be impaired. Both internal and external sources of information are used for this purpose. Internal sources include obsolescence or physical deterioration, and significant changes in the use of the asset and the operating performance of the asset compared to estimated performance. External sources include the market value of the asset, any changes in technology, markets or laws, trends in market interest rates and the cost of capital used to evaluate investments, and an excess of the carrying amount of the net assets of the Group over market capitalization.
If there is any indication that an asset – whether tangible or intangible with finite useful lives or a right of use has been impaired, then its carrying amount is reduced to its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell, and its value in use. In calculating the value in use, the estimated future cash flows are discounted to present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or right. If it is not possible to estimate the recoverable amount, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Impairment losses are recognized in the Separate Consolidated Income Statement.
When the reasons for the impairment subsequently cease to exist, the carrying value of the asset/right of use or of the cash generating unit is increased up to the new estimate of the recoverable amount which, however, cannot exceed the amount that would have been determined had no impairment loss been recognized. The reversal of an impairment loss is recognized as income in the Separate Consolidated Income Statement.

FINANCIAL LEASES ASSETS

Leases in which the Group, 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 and tangible assets of the Group 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 statement as financial revenue over the contractual term.

FINANCIAL INSTRUMENTS

Business models for financial assets management
For the management of trade receivables, the Group Management has identified the business model "Hold to Collect". These receivables 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") up to 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 the provision for expected credit losses ("impairment").

As part of managing financial assets other than trade receivables, the Group Management has identified its business models on the basis of how the financial instruments are managed and how their cash flows are used. This is done to ensure an adequate level of financial flexibility and to best manage, in terms of risks and returns, the financial resources immediately available through the treasuries of Group companies and in accordance with the strategies set forth by the Ultimate Parent TIM.
The business models adopted are:

- Hold to Collect: financial instruments used to absorb temporary cash surpluses; such instruments are low risk and mostly held to maturity; they are measured at amortized cost;
- Hold to Collect and Sell: monetary or debt instruments used to absorb short/medium-term cash surpluses; such instruments are low risk and generally held to maturity, or otherwise sold to cover specific cash requirements; they are measured at fair value through other consolidated comprehensive income (FVTOCI);
- Hold to Sell: monetary, debt and equity trading instruments used to dynamically manage cash surpluses not managed under the business models identified above; such instruments are higher risk and traded repeatedly over time; they are measured at fair value through consolidated profit or loss (FVTPL).

In order for a financial asset to be classified and measured at amortised cost or FVTOCI, it needs to give rise to cash flows that are “solely payments of principal and interest (SPPI)” on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level. Financial assets with cash flows that are not SPPI are classified and measured at fair value through profit or loss, irrespective of the business model.

At initial recognition, those financial asset are measured at fair value plus or minus, in the case of a financial asset not at FVTPL, transaction costs that are directly attributable to the acquisition or issue of the financial asset. Transaction costs include fees and commission paid to agents (including employees acting as selling agents), advisers, brokers and dealers, levies by regulatory agencies and security exchanges, and transfer taxes and duties. They do not include debt premiums or discounts, financing costs or internal administrative or holding costs.

Subsequent measurement changes according to category of financial assets:

- Amortised cost: Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognized directly in profit or loss and presented in other gains/(losses), together with foreign exchange gains and losses. Impairment losses are presented as a separate line item in the Consolidated Statement of Income.
- FVTOCI: Movements in the carrying amount are taken through OCI, except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognized in OCI is reclassified from equity to profit or loss and recognized in “Finance income and expenses”.
- FVTPL: A gain or loss on those investments is recognized in profit or loss and presented net within “Finance income and expenses” in the period in which it arises.

Financial assets are derecognized when the contractual rights to the cash flows from the financial asset expire, or they are transferred and the transfer qualifies for derecognition (therefore, the entity transfers substantially all the risks and rewards of ownership of the financial asset).

<u>Other investments</u>
Other investments (equity investments other than those in subsidiaries and associates) are classified as non-current or current assets if they will be kept in the Group's portfolio for a period of more or not more than 12 months, respectively.

Other investments are classified as “financial assets measured at fair value through consolidated profit or loss” (FVTPL), as current assets.
At the purchase time of each investment, IFRS 9 provides for the irrevocable option to recognize these investments in "financial assets measured at fair value through other consolidated comprehensive income" (FVTOCI) as non-current or current assets.
The other investments classified as “financial assets measured at fair value through other comprehensive income” are measured at fair value; changes in the fair value of these investments are recognized in a special equity reserve under the other components of the statements of comprehensive income (Reserve for financial

assets measured at fair value through other comprehensive income), without reclassification to the separate income statement when the financial asset is disposed of or impaired. Dividends are recognized in the separate consolidated income statement.
Changes in the value of other investments classified as "financial assets at fair value through profit or loss" are recognized directly in the separate consolidated income statement.

Securities other than investments
Securities other than equity investments included among non-current or current assets, depending on the business model adopted and the contractual flows envisaged, fall among financial assets measured at amortized cost, or measured at fair value through other comprehensive income or at fair value though profit or loss.
Securities other than investments classified as current assets are those that, by decision of the directors, are intended to be kept in the Group's portfolio for a period of not more than 12 months, and are classified:

- as "financial assets measured at amortized cost" (AC) when held to maturity (originally more than 3 months but less than 12 months, or, with an original maturity of more than 12 months but the remaining maturity at the date of purchase is more than 3 months but less than 12 months);
- as "financial assets measured at fair value through other consolidated comprehensive income" (FVTOCI) when held in the scope of a business model whose objective is to sell the financial asset and/or collect the contractual flows. The "Reserve for financial assets measured at fair value through other consolidated comprehensive income" is reversed to the Separate Consoldiated Income Statement when the financial asset is disposed of or impaired;
- as “financial assets measured at fair value through consolidated profit or loss" (FVTPL) in the other cases or when their cash flows are not SPPI.

Cash and cash equivalents
Cash and cash equivalents are recorded at amortized cost.
Cash equivalents are short-term and highly liquid investments that are readily convertible to known amounts of cash, subject to an insignificant risk of change in value and their original maturity or the remaining maturity at the date of purchase does not exceed 3 months.

Impairment of financial assets
At every closing date, assessments are made as to whether there is any objective evidence that a financial asset or a group of financial assets has been impaired.
The impairment of financial assets is based on the expected credit loss model.
In particular:

- impairment on trade receivables assets is carried out using the simplified approach that involves estimating the loss expected over the life of the receivable at the time of initial recognition and on subsequent measurements. It is 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.
- impairment on financial assets other than trade receivables is calculated on the basis of a general model which estimates expected credit losses over the following 12 months, or over the residual life of the asset in the event of a substantial worsening of its credit risk.

Derivative financial instruments
As allowed by IFRS 9, the Group decided to continue to apply the hedge accounting provisions contained in IAS 39, instead of those of IFRS 9.
Derivatives are used by the Group to manage its exposure to exchange rate and interest rate risks and to diversify the parameters of debt so that costs and volatility can be reduced within pre-established operational limits.
In accordance with IAS 39, derivative financial instruments qualify for hedge accounting only when:

- at the inception of the hedge, the hedging relationship is formally designated and documented;
- the hedge is expected to be highly effective;
- its effectiveness can be reliably measured;
- the hedge is highly effective throughout the financial reporting periods for which it is designated.

All derivative financial instruments are measured at fair value in accordance with IAS 39.
When derivative financial instruments qualify for hedge accounting, the following accounting treatment applies:

- Fair value hedge – Where a derivative financial instrument is designated as a hedge of the exposure to changes in fair value of an asset or liability due to a particular risk, the profit or loss from re-measuring the hedging instrument at fair value is recognized in the Separate Consolidated Income Statement. The profit or loss on the hedged item attributable to the hedged risk adjusts the carrying amount of the hedged item and is recognized in the Separate Consolidated Income Statement.

- Cash flow hedge – Where a derivative financial instrument is designated as a hedge of the exposure to variability in cash flows of an asset or liability or a highly probable expected transaction, the effective portion of any gain or loss arising from the fair value adjustment of the derivative financial instrument is recognized directly in a specific equity reserve (Reserve for fair value adjustment of hedging derivative instruments). The cumulative profit or loss is removed from equity and recognized in the Separate Consolidated Income Statement during the same business years in which the hedged transaction is recognized in the Separate Consolidated Income Statement. The profit or loss associated with the ineffective portion of a hedge is recognized in the Separate Consolidated Income Statement immediately. If the hedged transaction is no longer considered to be probable, the gains or losses not yet realized included in the equity reserve are immediately recognized in the Separate Consolidated Income Statement.

For derivatives for which a hedging relationship has not been designated, changes in value compared to initial recognition are recognized directly in the separate consolidated income statement

Financial liabilities

Financial liabilities include financial payables, including payables for advances on assignments of receivables where the assignment does not transfer substantially all the risks and rewards, as well as other financial liabilities, including derivative financial instruments and liabilities in respect of assets recognized under finance leases recognized in accordance with IFRS 16.
In accordance with IFRS 9, they also include trade and other payables.
Financial liabilities other than derivatives are initially recognized at fair value and subsequently measured at amortized cost.
Financial liabilities hedged by derivative instruments designed to manage exposure to changes in the fair value of liabilities (fair value hedge derivatives) are measured at fair value in accordance with the hedge accounting principles of IAS 39: the profits and losses deriving from subsequent fair value adjustments, only as regards the covered component, are recognized in the separate consolidated income statement and counterbalanced by the effective portion of the profit or loss deriving from the corresponding fair value measurements of the hedge instrument.
Financial liabilities hedged by derivative instruments designed to manage exposure to variability in cash flows (cash flow hedge derivatives) are measured at amortized cost in accordance with the hedge accounting principles of IAS 39.
Financial liabilities are derecognized when they are extinguished, i.e. when the obligation specified in the contract is discharged or cancelled or expires.

INVENTORIES

Inventories are measured at the lower of purchase or production cost and estimated realizable value; the cost is determined using the weighted average cost formula for each movement, while the estimated realizable value is determined by observing general prices at the end of the year. Provision is made for obsolete and slow-moving inventories based on their expected future use and estimated realizable value.

EMPLOYEE BENEFITS

Equity compensation plans

The companies of the Group provide additional benefits to certain managers of the Group through equity compensation plans (for example stock options and long-term incentive plans). The above plans are recognized in accordance with IFRS 2 (Share-Based Payment).
In accordance with IFRS 2, such plans represent a component of the beneficiaries' compensation. Therefore, for the plans that provide for compensation in equity instruments, the cost is represented by the fair value of such instruments at the grant date and is recognized in the Separate Consolidated Income Statement in "Employee benefits expenses" over the period between the grant date and vesting date with a contra-entry to an equity reserve denominated "Other equity instruments". Changes in the fair value subsequent to the grant date do not affect the initial measurement. At the end of each year, adjustments are made to the estimate of the number of rights that will vest up to expiry. The impact of the change in estimate is recorded as an adjustment to "Other equity instruments" with a contra-entry to "Employee benefits expenses".
The portion of the plans that specifies the payment of compensation in cash is recognized in liabilities as a contra-entry to "Employee benefits expenses"; at the end of each year said liability is measured at fair value.

PROVISIONS

The Group records provisions for risks and charges when having a current legal or constructive obligation to a third party, as a result of a past event, an outflow of Group resources is likely to be required to meet that obligation and when the amount of the obligation can be estimated reliably.

Provisions for risks and charges also include those established in the event that the company should stipulate contracts that thereafter became onerous, the non-discretionary costs of which necessary to fulfill the commitments made, exceeding the economic benefits expected from such contracts.
When the effect of the time value is material and the payment date of the obligations can be reasonably estimated, the provision is determined by discounting the given expected cash flows by taking into account the risks associated with the obligation. The increase in the provision due to the passage of time is recognized in the separate consolidated income statements as "Finance expenses".

FOREIGN CURRENCY TRANSACTIONS

Transactions in foreign currencies are recorded at the foreign exchange rate prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are converted at the foreign exchange rate prevailing at the statement of financial position date. Exchange differences arising from the settlement of monetary items or from their conversion at rates different from those at which they were initially recorded during the year or at the end of the prior year, are recognized in the Separate Consolidated Income Statement.

REVENUES

Revenues are the gross inflows of economic benefits during the period arising in the course of the ordinary activities of an entity. Amounts collected on behalf of third parties such as sales taxes, goods and services taxes and value added taxes are not economic benefits which flow to the entity and do not result in increases in equity. Therefore, they are excluded from revenues.
The process underlying the recognition of revenues follows the steps set out in IFRS 15:

- identification of the contract: takes place when the parties approve the contract (with commercial substance), identify the respective rights and obligations, this means that: the contract must be legally enforceable, the rights to receive goods and/or services and the terms of payment can be clearly identified and the Group deems receipt of payment as probable;
- identification of the performance obligations: based on the review of its contracts, the Group verified the existence of two performance obligations:(i)sale of equipment and (ii) provision of mobile, fixed and internet telephony services. Revenues recognition starts when, or as, the performance obligation is met when transferring the good or service promised to the customer; the asset is considered transferred when or as the customer obtains control of this asset;
- determination of the transaction price and allocation of the transaction price to the performance obligations: the Group sell commercial packages that combine services and sale of cellular handsets with discounts. In accordance with IFRS 15, the Group is required to perform the discount allocation and recognize revenues related to each performance obligation based on their standalone selling prices.
- recognition of revenues: revenues are stated net of discounts, allowances, and returns in connection with the characteristics of the type of revenue:
  - Revenues from services rendered
    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.
    Revenues are recognized monthly, through billing, and revenues to be billed between the billing date and the end of the month (unbilled) are identified, processed, and recognized in the month in which the service was provided. These non-billed revenues are recorded on an estimated basis, which takes into account consumption data, number of days elapsed since the last billing date.
    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.
  - Revenues from product sales
    Revenues from product sales (telephones, mini-modems, tablets and other equipment) are recognized when the performance obligations associated with the contract are transferred to the buyer. Revenues from sales of devices to trading partners are accounted for at the time of their physical delivery to the partner, net of discounts, and not at the time of sale to the end customer, since the Company has no control over the product sold.
    The recognition of revenues can generate the recognition of an asset or liability deriving from contracts. In particular:

- Contract assets are the rights to a consideration in exchange for goods or services that have been transferred to the customer, when the rights is conditioned on something other than the passage of time and are recognised as Other Receivable.
- Contract liabilities are the obligation to transfer goods or services to the customer for which the Group has received (or for which it is due) a consideration from the customer.

All incremental costs related to obtaining a contract (sales commissions and other costs of acquisition from third parties) are recorded as prepaid expenses and amortized over the same period as the revenue associated with this asset. Similarly, certain contract compliance costs are also deferred to the extent that they relate to performance obligations under the customer agreement, i.e. when the customer obtains control over the asset.

RESEARCH COSTS AND ADVERTISING EXPENSES

Research and advertising costs are directly expensed to the Separate Consolidated Income Statement in the year in which they are incurred.

FINANCE INCOME AND EXPENSES

Finance income and expenses are recognized on an accrual basis and include: interest accrued on the related financial assets and liabilities using the effective interest rate method; changes in the fair value of derivatives and other financial instruments measured at fair value through the income statements; gains and losses on foreign exchange and financial instruments (including derivatives).

DIVIDENDS

Dividends received from companies other than subsidiaries and associates are recognized in the Separate Consolidated Income Statement on an accrual basis, i.e. in the year in which they become receivable following the resolution by the shareholders' meeting for the distribution of dividends of the investee companies.
Dividends payable to third parties are reported as a change in equity in the year in which they are approved by the shareholders' meeting.

INCOME TAXES EXPENSE (CURRENT AND DEFERRED)

Income taxes include all taxes calculated on the basis of the taxable income of the companies of the Group.
Current and deferred income taxes are calculated using all the elements and information available at the reporting date, taking into account current laws and considering all the elements that could give rise to uncertainties in the determination of the amounts due to the tax authorities, as provided for in IFRIC 23.
Income taxes are recognized in the Separate Consolidated Income Statement, except to the extent that they relate to items directly charged or credited to equity, in which case the related tax effect is recognized in the relevant equity reserves.The amount of the income tax expense relating to each item included as "Other components of the Consolidated Statements of Comprehensive income" is indicated in the Statement of comprehensive income.
The provisions for taxes that could arise from the remittance of the undistributed earnings of subsidiaries are made only where there is the actual intention to remit such earnings.
Deferred tax liabilities / assets are recognized using the "Balance sheet liability method". They are calculated on all the temporary differences that arise between the taxable base of assets and liabilities and the related carrying amounts in the consolidated financial statements, except for differences arising from investments in subsidiaries that are not expected to reverse in the foreseeable future. Deferred tax assets relating to unused tax loss carryforwards are recognized to the extent that it is probable that future taxable income will be available against which they can be utilized. Tax assets and liabilities are offset, separately for current and deferred taxes, when income taxes are levied by the same tax authority and when there is a legally enforceable offsetting right. Deferred tax assets and deferred tax liabilities are determined by adopting the tax rates expected to be applicable in the respective jurisdictions of the countries in which the Group companies operate, in the years in which those temporary differences are expected to be recovered or settled.
The other taxes, not related to income, are included in "Other operating expenses".

USE OF ESTIMATES

The preparation of Consolidated Financial Statements and related notes in conformity with IFRS requires management to make estimates and assumptions based also on subjective judgments, past experience and assumptions considered reasonable and realistic in relation to the information known at the time of the estimate. Such estimates have an effect on the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, as well as on the amount of revenues and costs during the year. Actual results could differ, even significantly, from those estimates owing to possible changes in the factors considered in the determination of such estimates. Estimates are reviewed periodically.

The most significant accounting estimates that involve a high level of subjective assumptions and judgments are detailed below.

Financial statement line item/area	Accounting estimates
Impairment of goodwill	The impairment test on goodwill is carried out by comparing the carrying amount of cash-generating units and their recoverable amount. The recoverable amount of a cash-generating unit is the higher of fair value, less costs to sell, and its value in use. If the market capitalization, taking in account the volatility, is sufficiently high, it is considered as the recoverable value. Otherwise, the valuation process entails the use of methods such as the discounted cash flow method, which uses assumptions to estimate cash flows. The fair value net of disposal costs is based on the current value of forecast cash flow, calculated using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. The recoverable amount depends significantly on the discount rate used in the discounted cash flow model as well as the expected future cash flows and the growth rate used for the extrapolation. The key assumptions used to determine the recoverable amount for the different cash generating units, including a sensitivity analysis, are detailed in the Note "Goodwill".
Impairment of intangible and tangible assets with finite useful lives and right of use assets	At the end of each reporting period, the Group assesses whether there is any indication that an asset – whether tangible or intangible with finite useful lives or a right-of-use – has been impaired. Both internal and external sources of information are used for this purpose. Identifying the impairment indicators, estimating future cash flows and calculating the fair value of each asset requires the Management to make significant estimates and assumptions in calculating the discount rate to be used, and the useful life and residual value of the assets. These estimates can have a significant impact on the fair value of the assets and on the amount of any impairment write-down.
Business combinations	The recognition of business combinations requires that assets and liabilities of the acquiree be recorded at their fair value at the control acquisition date, as well as the possible recognition of goodwill. These values are determined through a complex estimation process
Expected Credit Loss	Impairment on trade receivables assets is carried out using the simplified approach that involves estimating the loss expected over the life of the receivable at the time of initial recognition and on subsequent measurements. It is 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. Impairment on financial assets other than trade receivables is calculated on the basis of a general model which estimates expected credit losses over the following 12 months, or over the residual life of the asset in the event of a substantial worsening of its credit risk. Details are provided in the Note "Financial Risk Management".
Provision for legal and administrative proceedings	The legal and administrative proceedings are analyzed by the Management along with its legal advisors (internal and external). The Group considers factors in its analysis such as hierarchy of laws, precedents available, recent court judgments, their relevance in the legal system and payment history. These assessments involve Management's judgment. Further detail are provided in the Note "Disputes and pending legal actions, other information, commitments and guarantees".
Unbilled revenues	Since some cut dates for billing occur at intermediate dates within the months of the year, as the end of each month there are revenues earned by the Group, but not actually invoiced to its customers. These unbilled revenues are recorded based on estimate that takes into consideration historical consumption data, number of days elapsed since the last billing date, among others.
Income tax and social contribution (current and deferred)	Income tax and social contribution (current and deferred) are calculated according to interpretations of current legislation and IAS 12. This process typically involves complex estimates to determine taxable income and temporary differences. In particular, the deferred assets on tax losses, negative basis of social contribution and temporary differences is recognized in proportion to the probability that future taxable income is available and can be used. The measurement of the recoverability of deferred income tax on tax losses, negative basis of social contribution and temporary differences takes the history of taxable income into account, as well as the estimate of future taxable income. Further detail are provided in the Note "Income taxes (current and deferred)".

Financial statement line item/area	Accounting estimates
Derivative instruments and equity instruments	The fair value of derivative instruments and equity instruments is determined both using valuation models which also take into account subjective measurements such as, for example, cash flow estimates, expected volatility of prices, etc., and on the basis of prices existing in regulated markets or quotations provided by financial counterparts. For further details, please also see the Note "Supplementary disclosures on financial instruments".
Leasing	The Group has a significant number of lease agreements in which it is the lessee, whereby with the adoption of accounting standard IFRS 16, the Group Management made certain judgments when measuring the lease liability and the right of use assets, such as: (i) an estimation of the lease term, considering a non-cancellable period and the periods covered by options to extend the lease term, where such exercise depends only on the Group and is reasonably certain; (ii) use of certain assumptions to calculate the discount rate. According to paragraph 18 of IFRS 16, an entity shall determine the lease term as the non-cancellable period of a lease, together with both periods covered by an option to extend the lease (if the lessee is reasonably certain to exercise that option) and periods covered by an option to terminate the lease (if the lessee is reasonably certain not to exercise that option). During the non-cancellable lease period, the contract must be enforceable. A lease is no longer enforceable when the lessee and the lessor each has the right to terminate the lease without permission of the other party with no more than an insignificant penalty. The Group is not able to readily determine the interest rate implicit on the lease and, therefore, considers its incremental rate on loans to measure lease liabilities. Incremental rate on the lessee´s borrowing is the interest rate that the lessee would have to pay when borrowing, for a similar term and with a similar guarantee, the resources necessary to obtain the asset with a value similar to the right of use asset in a similar economic environment. Thus, this assessment of lease, considering non-cancellable period and the period covered by options to extend the contract term. The Group estimates the incremental rate using observable data (such as market interest rates) when available and considers aspects that are specific to the Company (such as the cost of debt) in this estimate. The Group´s average incremental rate is 13,24% for an average lease term.

NEW STANDARDS AND INTERPRETATIONS ENDORSED BY THE EU AND IN FORCE FROM JANUARY 1, 2022

As required by IAS 8 (Accounting Policies, Changes in Accounting Estimates and Errors), the following is a brief description of the IFRS in force as from January 1, 2022.

Collection of changes of limited scope to the IFRSs
On June 28, 2021, Commission Regulation (EU) 2021/1.080 was issued, implementing various amendments of limited scope to the IFRSs. The collection includes changes to three IFRSs as well as annual improvements to the IFRSs that regard minor, non urgent changes (but which are necessary). These changes must be applied for all years starting after January 1, 2022. The following amendments have been issued:

- **IAS 16: "Property, plant and equipment" Proceeds before intended use**
  The amendment prohibits a company from deducting from the cost of Property, plant and equipment amounts received from selling items produced while the company is preparing the asset for the intended use (e.g. proceeds from the sale of samples produced when testing a machine to see if it is functioning properly).
  The proceeds from the sale of any such samples, together with the costs for their production, must be noted on the income statement.
- **IAS 37: "Onerous contracts Costs of fulfilling a contract"**
  The amendment clarifies the meaning of "costs of fulfilling a contract". The amendment clarifies that the direct costs for the execution of a contract include:
    a. incremental costs for fulfilling the contract (e.g. labor and direct materials); and
    b. an allocation of other costs directly related to the fulfillment of contracts (e.g. allocation of the depreciation share for an item of Property, plant and equipment used to fulfill a contract).

  The change may entail the recording of more onerous provision as previously some entities only included the incremental costs in the costs for fulfilling a contract.
- **IFRS 3: "Reference to the conceptual framework"**
  The Board has updated IFRS 3 "Business combinations" to refer to the 2018 conceptual framework for financial reporting, in order to determine what exactly is an asset or a liability in a business combination. Before the amendment, IFRS 3 referred to the 2001 conceptual framework for the financial disclosure.
  These changes do not alter the accounting procedure envisaged for business combinations.

The adoption of these amendments had no effect on the Consolidated Financial Statements 2022.

Annual improvements to the IFRSs (20182020 cycle)

- **Amendment to IFRS 9 Fees included in the 10 per cent test for derecognition of financial liabilities**
  This change establishes the commission to be included in the 10 per cent test for derecognition of financial liabilities (in the event of a change or exchange of a financial liability, IFRS 9 Financial instruments specifies a quantitative “10 per cent” test. This test assesses if the new contractual conditions between the borrower and creditor are substantively different from the original contractual conditions in determining whether or not the original financial liability should be derecognized).
  Costs or commissions may be paid to third parties or to the creditor. In accordance with the change, the costs or commissions paid to third parties will not be included in the 10 per cent test.
- **Amendment to the illustrative examples accompanying IFRS 16 “Leases”**
  The Board has amended Illustrative Example 13 that accompanies IFRS 16 to remove the illustration of the reimbursement of leasehold improvements by the lessor. The reason for the amendment is to remove any potential confusion regarding how lease incentives should be processed.
- **Amendment to IFRS 1 "First time adoption of the International Financial Reporting Standards"**
  The amendment simplifies the adoption of IFRS 1 by a subsidiary that becomes a first time adopter after its parent. IFRS 1 grants an exemption i f a subsidiary adopts the IFRSs later than its parent. The subsidiary can measure its assets and liabilities at the carrying amounts that would be included in the consolidated financial statements of the parent, on the basis of the date of transfer of the parent company to the IFRSs, if no adjustments are made for the consolidation procedures and as a result of the corporate aggregation in which the parent acquired the subsidiary.
  The Board has amended IFRS 1 to allow entities that adopted this exemption from IFRS 1 to also measure the cumulative conversion differences using the amounts reported by the parent, on the basis of the transition date of the parent company to the IFRSs. The change to IFRS 1 extends this exemption to the cumulative conversion differences in order to reduce the costs for first time adopters. This change will also apply to associates and joint ventures that have obtained the same exemption from IFRS 1.

All these changes are in force starting January 1, 2022 with early application permitted.

The adoption of these amendments had no effect on the Consolidated Financial Statements 2022.

NEW STANDARDS AND INTERPRETATIONS ISSUED BY IASB BUT NOT YET APPLICABLE

At the reporting date of these Consolidated Financial Statements 2022, the IASB had issued the following new Standards and Interpretations which have not yet come into force and have not yet been endorsed by the EU.

	Mandatory application starting from
New Standards and Interpretations not yet endorsed by the EU	
Amendments to IAS 1 Presentation of Financial Statements: classification of liabilities as current or non-current	1 January, 2024
Amendments to IFRS 16: Lease liabilities in a sale and lease-back	1 January, 2024
Amendments to IAS 1 Presentation of Financial Statements: non-current liabilities with covenants	1 January, 2024
New Standards and Interpretations endorsed by the EU	
Amendments to IAS 8 - Accounting Policies, Changes in Accounting Estimates and Errors	1 January, 2023
Amendments to IAS 12 Income taxes: deferred tax related to assets and liabilities arising from a single transaction	1 January, 2023
Amendments to IAS 1 - Presentation of Financial Statements	1 January, 2023

The potential impacts on the Group Consolidated Financial Statements from application of these standards and interpretations are currently being assessed.

Note 3 - Scope of Consolidation

INVESTMENTS IN CONSOLIDATED SUBSIDIARIES

Composition of the Group
The Group holds a majority of the voting rights in all the subsidiaries included in the scope of consolidation.
A complete list of consolidated subsidiaries is provided in the Note "List of companies of the Telecom Italia Finance Group".

SCOPE OF CONSOLIDATION

The changes in the scope of consolidation at December 31, 2022 compared to December 31, 2021 are listed below.

Company	Event	Business Unit	Month
Cozani RJ Infraestrutura e Rede de Telecomunicações S.A.	New acquisition	Brazil	April 2022

Further details are provided in the Note "Business Combinations" and "List of companies of the Telecom Italia Finance Group".

SUBSIDIARIES WITH SIGNIFICANT NON-CONTROLLING INTERESTS

At December 31, 2022, the Group held equity investments in subsidiaries with significant non-controlling interests in TIM Brasil Group.

The figures provided below, stated before the netting and elimination of intragroup accounts, comply with IFRS and reflect adjustments made at the acquisition date to align the assets and liabilities acquired to their fair value.

TIM Brasil Group – Brazil Business Unit
Non-controlling interests accounted at December 31, 2022 amounted to 33,4% of the capital of TIM S.A., coinciding with the corresponding voting rights.

Financial Position Data TIM Brasil Group

(million euros)	31/12/2022	31/12/2021
Non-current assets	8.649	5.787
Current assets	1.924	2.476
Total Assets	**10.574**	**8.263**
Non-current liabilities	3.157	2.159
Current liabilities	2.420	1.750
Total Liabilities	**5.577**	**3.909**
Equity	**4.997**	**4.353**
of which Non-controlling interests	*1.545*	*1.345*

Income statement Data TIM Brasil Group

(million euros)	31/12/2022	31/12/2021
Revenues	3.963	2.840
Profit (loss) for the year	**289**	**455**
of which Non-controlling interests	*102*	*155*

Financial Data TIM Brasil Group
In 2022, aggregate cash flows generated a negative amount of 369 million euros, including a negative exchange rate effect of 45 million euros, without which cash flow would have generated a negative amount of 324 million euros.
In 2021, aggregate cash flows generated a positive amount of 416 million euros, partially due to a positive exchange rate effect of 6 million euros, without which cash flow would have generated a positive amount of 410 million euros.
The difference between 2022 and 2021 is mainly due to the payment of 1.316 million euros for the acquisition of Cozani RJ Infraestrutura e Rede de Telecomunicações S.A (further details are provided in the Note Business combinations).

Lastly, again with reference to the TIM Brasil Group, the main risk factors that could, even significantly, restrict the operations of the TIM Brasil Group are listed below:

- strategic risks (risks related to macroeconomic and political factors, as well as risks associated with foreign exchange restrictions and competition);
- operational risks (risks related to business continuity and development of the fixed and mobile networks, as well as risks related with disputes and litigation);
- financial risks;
- regulatory and compliance risks.

Note 4 - Business combinations

ACQUISITION OF THE MOBILE TELEPHONE ASSETS OF OI MÓVEL S.A.
On April 20, 2022, TIM S.A. (Brazilian subsidiary of the TIM Group), Telefônica Brasil S.A. and Claro S.A., after having fulfilled the conditions established by the Conselho Administrativo de Defesa Econômica (CADE) and the Agência Nacional de Telecomunica ções (ANATEL), concluded the acquisition of the mobile telephone assets of Oi Móvel S.A. Em Recuperação Judicial.
With the conclusion of the transaction, TIM S.A. now holds 100% of the share capital of Cozani RJ Infraestrutura e Rede de Telecomunicações S.A., a company that corresponds to part of the assets, rights and obligations of Oi Móvel acquired by the company.

The business combination was provisionally recognized in the accounts as follows:
- a consideration of 1.373 million euros;
- all Assets acquired and Liabilities undertaken of the acquired companies were measured for recognition at fair value;
- in addition to the value of the Assets acquired and Liabilities undertaken, Goodwill equal to 502 million euros was recognized, determined as shown in the next table:

		Values at fair value (million euros) [*]	Values at fair value (million reais)
Valuation of the consideration	a)	1.373	7.212
Value of assets acquired	b)	1.629	8.559
Value of liabilities undertaken	c)	-758	-3.983
Goodwill	**a)-b)-c)**	**502**	**2.636**

[*] Real/euro exchange rate 5,25403.

The goodwill paid of 502 million euros comprises the value of future economic benefits arising from synergies expected from the acquisition. Goodwill is allocated on a consolidated basis as the assets acquired and liabilities assumed bring benefits to the business as a whole. There is no expectation that the goodwill recognized will be deductible for tax purposes until the corporate merger of the company Cozani takes place, which should occur throughout 2023.

Cozani RJ Infraestrutura e Rede de Telecomunicações S.A. values at the acquisition date

		Present values at fair value (million euros) [*]	Carrying amounts	Present values at fair value (million reais)	Carrying amounts
Goodwill		502	—	2.636	—
Other non-current assets [**]		1.489	862	7.825	4.532
current assets		140	140	734	734
of which Cash and cash equivalents		*37*	*37*	*193*	*193*
Total assets	**a)**	**2.131**	**1.002**	**11.195**	**5.266**
Total non-current liabilities		549	549	2.886	2.886
of which non-current financial liabilities		*459*	*459*	*2.413*	*2.413*
Total current liabilities		209	209	1.097	1.097
of which current financial liabilities		*98*	*98*	*517*	*517*
Total liabilities	**b)**	**758**	**758**	**3.983**	**3.983**
Net assets	**a)-b)**	**1.373**	**244**	**7.212**	**1.283**

[*] Real/euro exchange rate 5,25403.
[**]The difference between fair value and carrying amounts of non current assets is due to i) surplus of radio frequencies.The intangible asset value refers to the adjustment in the authorizations item reflecting the fair value of the acquired grants and the spectrum assessment was carried out using the market approach, with the application of a transaction multiple. The average useful life is 17,68 years; (ii) Surplus of customers' portfolio. The evaluation of the customer portfolio was conducted using the profitability approach, using the MPEEM (Multi-period excess earning method) method based on a calculation of cash flows from future economic benefits attributable to the customer base. The average useful life is 8,67 years.

It should be noted that in September 2022, TIM S.A. and the other buyers of the Oi Móvel S.A. mobile telephone assets had identified differences in the assumptions and calculation criteria that, under the terms of the Share Purchase Agreement and Other Covenants ("SPA"), justify a proposal to change the Adjusted Closing Price ("ACP").As far as TIM S.A. is concerned, the impact of such difference amounts approximately to 1,4 billion reais (0,3 billion euros). In addition to differences relating to the Adjusted Closing Price, others have also been

identified relating to the contracts of Cozani with companies supplying mobile infrastructure services (site/tower rental), which, under the terms of the "SPA", give rise to indemnity by the Seller in TIM S.A.'s favor, of approximately 231 million reais (42 million euros). As a result of the differences found, TIM S.A. retained an amount of 634 million reais (116 million euros - 671 million reais at December 2022) of the total consideration of 7.212 million reais (1.373 million euros).
In October 2022, considering the Seller's express violation of the dispute resolution mechanisms provided for in the SPA, TIM S.A. communicated that the Buyers had no other alternative but to file an arbitration procedure with the Market Arbitration Chamber (Câmara de Arbitragem do Mercado) of B3 S.A. - Brasil, Bolsa, Balcão against the Seller to determine the effective amount of the adjustment to the Adjusted Closing Price, in accordance with the SPA.
Additionally, in October 2022, the 7th Business Court of the Judicial District of Rio de Janeiro handed down a preliminary decision, determining the deposit in court by the Buyers of approximately 1,53 billion reais (0,3 billion euros) – of which approximately 670 million reais (123 million euros) by TIM S.A. – in an account linked to the court-ordered reorganization process of Oi, where it will be safeguarded until a later decision by the arbitration court.
Further details are provided in the Note "Disputes and Pending Legal Actions, other information, commitments and guarantees".

It should also be noted that:

- if the acquisition of Cozani RJ Infraestrutura e Rede de Telecomunicações S.A. had been completed on January 1, 2022, the consolidated financial statements of the TIM Group as at December 31, 2022 would have recorded revenues approximately 120 million euros higher, with an impact of approximately -170 million euros on the net result for the period attributable to the Owners of the Parent Company;
- at the time of the acquisition of Cozani, there were certain contractual provisions linked to the fulfillment of migration targets by the Oi Group, in the amount of 77 million reais and the fulfillment of these targets was under the evaluation of the Company's Management at December 31, 2022;
- on February 27, 2023, the TIM S.A. Board of Directors approved the terms and conditions of the merger with Cozani RJ Infraestrutura e Redes de Telecomunicações S.A.. Since the merger was probable from the date of acquisition no deferred taxes were recognized.

Note 5 - Goodwill

Goodwill is only referred to Brazil Cash Generating unit ("CGU") and shows the following changes during 2022 and 2021:

(million euros)	**31/12/2021**	Increase	Decrease	Impairments	Exchange differences	**31/12/2022**
Brazil	**443**	502	—	—	32	**977**

(million euros)	**31/12/2020**	Increase	Decrease	Impairments	Exchange differences	**31/12/2021**
Brazil	**604**	—	-165	—	4	**443**

The gross carrying amounts of goodwill and the relative accumulated impairment losses can be summarized as follows:

(million euros)	31/12/2022			31/12/2021		
	Gross carrying amount	Accumulated impairment losses	**Net carrying amount**	Gross carrying amount	Accumulated impairment losses	**Net carrying amount**
Brazil	**1.144**	**167**	**977**	**591**	**148**	**443**

The figures for the Brazil CGU are stated in euros, converted at the spot exchange rate at the closing date of the financial statements; the carrying amount of goodwill for the CGU corresponds at December 31, 2022 to 5.439 million reais (2.803 million reais at December 31, 2021).

With reference to the Brazil Cash Generating Unit, Goodwill recorded:

- an increase of 502 million euros (2.636 million reais) relating to the recognition of goodwill connected with the acquisition of some of the mobile telephone assets of Oi Móvel S.A. For more details, see the note "Business combinations";
- net exchange gains for 32 million euros. In particular, the exchange rate used to convert Brazilian reais into euros (expressed in terms of local currency units per 1 euro) went from 6,32047 as of December 31, 2021 to 5,56520 as of December 31, 2022.

In 2021 the Goodwill decreased of 165 million euros following the deconsolidation of I-Systems S.A. (formerly FiberCo Soluções de Infraestrutura S.A.), a company set up by the Brazilian subsidiary TIM S.A. for the segregation of its network assets and the provision of infrastructure services.

In accordance with IAS 36, goodwill is not subject to amortization, but is tested for impairment on at least an annual basis, when preparing the company's consolidated financial statements. Accordingly, the Group conducted impairment tests on the recoverability of the goodwill. The results showed that the recoverable amount of the assets at December 31, 2022 was higher than the net carrying amount for the Brazil CGU (+217 million of euros).
The value used to measure the recoverable amount of the Cash Generating Unit to which goodwill has been allocated is the fair value, based on market capitalisation as of the end of the reporting period. The recoverable amount of the assets was denominated in the functional currency and subsequently translated at the spot exchange rate at the reporting date. In estimating the recoverable amounts, simulations were conducted on the results with respect to changes in the relevant parameters. To make the recoverable amount of the Brazil CGU equal to their net carrying amount the market capitalization should vary of -4%.

Considering that the recoverable amount has been based on the market capitalization, the Group did not made assumptions for estimating cash flows, including evaluation of the climate change impact.

Note 6 - Intangible assets with a finite useful life

All intangible assets with a finite useful life in the 2022 and 2021 are referred to Brazil Business Unit.

(millions of euros)	**31/12/2021**	Investments	Amortization	Exchange differences	Capitalized borrowing costs	Other Changes	**31/12/2022**
Industrial patents and intellectual property rights	**392**	177	-186	53	—	1	**438**
Concessions, licenses, trademarks and similar rights	**753**	14	-147	70	—	633	**1.323**
Other intangible assets	**1**	1	-4	-2	—	48	**44**
Work in progress and advance payments	**406**	23	—	54	48	—	**530**
Total	**1.552**	**215**	**-338**	**175**	**48**	**682**	**2.334**

(millions of euros)	**31/12/2020**	Investments	Amortization	Disposals	Exchange differences	Other Changes	**31/12/2021**
Industrial patents and intellectual property rights	**429**	108	-182	—	4	34	**393**
Concessions, licenses, trademarks and similar rights	**642**	191	-87	—	6	—	**753**
Other intangible assets	**2**	1	-1	—	—	—	**1**
Work in progress and advance payments	**55**	382	—	—	3	-34	**406**
Total	**1.128**	**682**	**-269**	**—**	**13**	**—**	**1.553**

Investments in 2022 amounted to 215 million euros (682 million euros in 2021) and included 29 million euros in internally generated assets (21 million euros in 2021). Further details are provided in the Note "Internally generated assets".

Industrial patents and intellectual property rights at December 31, 2022 consisted mainly of software licenses.

Concessions, licenses, trademarks and similar rights at December 31, 2022 mainly related to the remaining cost of telephone licenses and similar rights for 1.268 million of euros (716 million euros at December 31, 2021). Other changes of 633 million euros refer to the entrance into the consolidation scope of Cozani RJ Infraestrutura e Rede de Telecomunicações S.A..

The residual amount of telephone licenses and similar rights in operation and their useful lives are detailed below:

Type	Residual value at 31/12/2022 (million euros)	Useful life in years	Amortization expense for 2022 (million euros)
GSM and 3G (UMTS) - TIM S.A.	22	15	24
4G (LTE - 700 MHz) -TIM S.A.	496	15	74
5G (2,3 GHz and 26 GHz) - TIM S.A.	200	20	14
900 - 1800 -1900 - 2100 - 2500 MHz - Cozani	551	15-18	28

Work in progress and advance payments are connected with the rights to use 3,5 GHz frequencies (5G). For the latter, as the time period required for the assets to be ready for use is more than 12 months, in 2022, the related finance expenses of 48 million euros were capitalized. The capitalized finance expenses have been deducted directly from "finance expense".

Amortization have been reported in the income statement as components of the operating result.

No impairment losses have been recorded during the year 2022 and 2021.

The gross carrying amount, accumulated impairment losses and accumulated amortization at December 31, 2022 and 2021 can be summarized as follows:

		31/12/2022	
(million euros)	Gross carrying amount	Accumulated amortization	Net carrying amount
Industrial patents and intellectual property rights	3.989	3.551	438
Concessions, licenses, trademarks and similar rights	2.896	1.573	1.323
Other intangible assets with a finite useful life	479	435	44
Work in progress and advance payments	530	—	530
Total intangible assets with a finite useful life	**7.894**	**5.560**	**2.334**

		31/12/2021	
(million euros)	Gross carrying amount	Accumulated amortization	Net carrying amount
Industrial patents and intellectual property rights	3.144	2.752	392
Concessions, licenses, trademarks and similar rights	1.775	1.022	753
Other intangible assets with a finite useful life	381	379	2
Work in progress and advance payments	406	—	406
Total intangible assets with a finite useful life	**5.706**	**4.153**	**1.553**

Note 7 - Tangible assets

All tangible assets in the 2022 and 2021 are referred to Brazil Business Unit.

PROPERTY, PLANT AND EQUIPMENT OWNED

(million euros)	**31/12/2021**	Investments	Depreciation	Disposals	Exchange differences	Other Changes	**31/12/2022**
Land	**6**	—	—	—	1	—	**7**
Buildings (civil and industrial)	**10**	—	-1	—	1	—	**10**
Plant and equipment	**1.501**	510	-465	—	196	185	**1.927**
Other	**95**	44	-48	-1	13	7	**110**
Construction in progress and advance payments	**79**	96	—	—	11	-91	**94**
Total	**1.691**	**650**	**-514**	**-2**	**221**	**101**	**2.147**

(million euros)	31/12/2020	Investments	Depreciation	Disposals	Exchange differences	Other Changes	Deconsolidation of I-System S.A.	31/12/2021
Land	**6**	—	—	—	—	—	—	**6**
Buildings (civil and industrial)	**11**	—	-1	—	—	—	—	**10**
Plant and equipment	**1.546**	453	-371	-10	13	57	-187	**1.501**
Other	**90**	38	-39	—	1	6	-1	**95**
Construction in progress and advance payments	**54**	78	—	3	1	-54	-3	**79**
Total	**1.707**	**570**	**-411**	**-7**	**15**	**9**	**-192**	**1.691**

Investments in 2022 amounted to 650 million euros (570 million euros in 2021) and included 64 million euros in internally generated assets (51 million euros in 2021). Further details are provided in the Note “Internally generated assets”.

In 2021 the item decreased following the deconsolidation of I-Systems S.A. (formerly FiberCo Soluções de Infraestrutura S.A.), a company set up by the Brazilian subsidiary TIM S.A. for the segregation of its network assets and the provision of infrastructure services. The deconsolidation is a consequence of the completion, in November 2021, of the agreement between TIM S.A. and IHS Fiber Brasil Cessão de Infraestruturas Ltda. which resulted in the dilution from 100% to 49% of TIM S.A.'s investment in I- Systems S.A.

Land comprises both built-up land and available land and is not subject to depreciation.

Buildings (civil and industrial) mainly includes buildings for industrial use hosting telephone exchanges or for office use, and light constructions.

Plant and equipment includes the aggregate of all the structures used for the functioning of voice and data telephone traffic.
Other changes include 112 million euros related to the entrance into the consolidation scope of the mobile telephone assets of Oi Móvel S.A. acquired by the TIM Group in April 2022. For further details, see the note "Business combinations".

The item **Other** mainly consists of hardware for work stations, furniture and fixtures and, to a minimal extent, transport vehicles and office machines.

Construction in progress and advance payments refers to the internal and external costs incurred for the acquisition and internal production of tangible assets, which are not yet in use.

Depreciation have been reported in the income statement as components of the operating result.

No impairment losses have been recorded during the year 2022 and 2021.

Depreciation for the years 2022 and 2021 was calculated on a straight-line basis over the estimated useful lives of the assets according to the following minimum and maximum rates:

Buildings (civil and industrial)	4%
Plant and equipment	4% - 33%
Other	10% - 50%

The gross carrying amount, accumulated impairment losses and accumulated depreciation at December 31, 2022 and 2021 can be summarized as follows:

	31/12/2022		
(million euros)	**Gross carrying amount**	Accumulated depreciation	Net carrying amount
Land	**7**	—	7
Buildings (civil and industrial)	**24**	14	10
Plant and equipment	**7.549**	5.622	1.927
Other	**1.167**	1.057	110
Construction in progress and advance payments	**94**	**—**	**94**
Total	**8.840**	**6.693**	**2.147**

	31/12/2021		
(million euros)	**Gross carrying amount**	Accumulated depreciation	Net carrying amount
Land	**6**	—	6
Buildings (civil and industrial)	**21**	11	10
Plant and equipment	**5.034**	3.533	1.501
Other	**842**	746	95
Construction in progress and advance payments	**79**	**—**	**79**
Total	**5.982**	**4.291**	**1.691**

Note 8 - Right of use assets

At December 31, 2022 right of use assets amounted to 1.981 million euros and are referred to Brazil Business Unit. The breakdown and movements during the 2022 and 2021 are shown below.

(millions of euros)	31/12/2021	Investments	Increase in lease contracts	Depreciation and amortization	Disposals	Exchange differences	Other Changes	31/12/2022
Property	324	—	154	-94	-16	35	142	**545**
Plant and equipment	928	5	330	-314	-21	105	402	**1.436**
Other	1	—	—	-1	—	—	—	**—**
Total	**1.253**	**5**	**484**	**-409**	**-36**	**140**	**544**	**1.981**

(millions of euros)	31/12/2020	Investments	Increase in lease contracts	Depreciation and amortization	Disposals	Exchange differences	Other Changes	31/12/2021
Property	299	—	145	-50	-61	3	-11	**324**
Plant and equipment	880	1	296	-163	-76	8	-17	**928**
Other	2	—	—	-1	—	—	—	**1**
Total	**1.180**	**1**	**441**	**-214**	**-137**	**11**	**-28**	**1.253**

The increases in financial leasing contracts in 2022, equal to 484 million euros (441 million euros at December 31, 2021), include the higher value of the rights of use recorded as a result of new leases, increases of lease payments and renegotiation of agreements existing related both to land and buildings for office use and industrial relationship over time, to infrastructure sites for the mobile telephone network infrastructure and network.

The disposals are representative of the carrying amount of the assets from lease agreements that terminated early.

Other changes for 558 million euros refer to the entrance into the consolidation scope of the mobile telephone assets of Oi Móvel S.A..
The item **Property** includes buildings under passive leases and related building adaptations.

The item **Plant and equipment** mainly includes the rights of use on the infrastructures for telecommunications services. This includes, among others, the recognition of the value of the telecommunications towers sold by the TIM Brasil group to American Tower do Brasil and subsequently repurchased in the form of finance lease. Further details on finance lease are provided in the Note "Financial liabilities (non-current and current)".

Amortization have been recorded in the income statement as components of EBIT.

No impairment losses have been recorded during the year 2022 and 2021.

The gross carrying amount, accumulated impairment losses and accumulated depreciation at December 31, 2022 and 2021 can be summarized as follows:

	31/12/2022		
(million euros)	Gross carrying amount	Accumulated amortization	Net carrying amount
Property	775	230	545
Plant and equipment	2.248	813	1.436
Other	8	8	—
Total	**3.031**	**1.050**	**1.981**

	31/12/2021		
(million euros)	Gross carrying amount	Accumulated amortization	Net carrying amount
Property	451	127	324
Plant and equipment	1.381	452	928
Other	7	6	1
Total	**1.839**	**586**	**1.253**

Note 9 - Investments

INVESTMENTS IN ASSOCIATES ACCOUNTED FOR USING THE EQUITY METHOD

Investments in associates accounted for using the equity method are reported below:

(million euros)	31/12/2022	31/12/2021
I-Systems S.A.	277	253
Total	**277**	**253**

The changes to the item during the year are due to equity method accounting for -11 million euros and exchange rate difference for 35 million euros.

The following table represents summarized financial information about the investment of I-Systems:

(millions of euros)	31/12/2022	31/12/2021
Assets	**327**	**241**
Current and non-current assets	52	37
Tangible and intangible assets	275	205
Liabilities and shareholders' equity	**327**	**241**
Current and non-current liabilities	72	17
Shareholders' equity	256	224
Net loss for the year	**-23**	**-4**
Group's proportional interest	**49 %**	**49 %**
Group's interest in the associated company's income (loss)	**-11**	**-2**

The Groups' proportional share of the shareholders' equity in I-Systems S.A. corresponds to 125 million euros. The difference with the value of the investment is due to the higher fair value attributed at the acquisition of the associate.

Other investments in associates accounted for using the equity method include TI Audit Compliance Latam S.A. that is an associate to the Group, but its contributions in the Consolidated Financial Statements is considered to be non-material.

INVESTMENTS IN STRUCTURED ENTITIES

The Group does not hold investments in structured entities.

Note 10 - Financial assets (non-current and current)

(millions of euros)	31/12/2022	31/12/2021
Non-current financial assets	**1.706**	**1.927**
Financial receivables for lease contracts	37	34
Hedging derivatives relating to hedged items classified as non-current assets/ liabilities of a financial nature	2	1
Non-hedging derivatives	503	710
Loans and other financial receivables	1.164	1.182
Current financial assets	**4.656**	**5.628**
Securities other than investments	**1.446**	**2.249**
Fair value through other comprehensive income (FVTOCI)	1.040	1.515
Fair value through profit or loss (FVTPL)	406	733
Financial receivables and other current financial assets	**168**	**133**
Financial receivables arising from lease contracts	6	5
Non-hedging derivatives	71	44
Loans and other financial receivables	91	84
Cash and cash equivalents	**3.042**	**3.247**
Total non-current and current financial assets	**6.362**	**7.555**

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

Financial receivables for lease contracts refers to finance leases on rights of use (Brazil Business Unit).

Hedging derivatives relating to hedged items classified as non-current assets/liabilities of a financial nature refers mainly to the mark-to-market component of the hedging derivatives.

Non-hedging derivatives relating to items classified as current and non-current financial assets totaled 574 million euros (754 million euros at December 31, 2021). These include the measurement of derivatives which, although put into place for hedging purposes, do not possess the formal requisites to be considered as such under IFRS and derivatives put in place in the framework of the activity of centralizing all the banking exposures of the TIM Group (further details are provided in the Note “Derivatives”). At December 31, 2022 the mark-to-market component of the non-hedging derivatives of the Brazil Business Unit is equal to 112 million euros (72 million euros at December 31, 2021) in relation to the option to subscribe shares of C6 Bank with which TIM S.A. entertains commercial relations.

Loans and receivables both in current and non-current financial assets amounts to 1.256 million euros (1.266 million euros at December 31, 2021) and refers to loans granted by the Parent to the ultimate Parent and other TIM Group companies. Regarding the loans granted to the ultimate Parent company, the credit risk is considered low based on the financial capability of TIM S.p.A. Other loans are considered fully recoverable by the management.

Securities other than investments included in current assets relates to:

- listed securities, classified as FVTOCI - *Fair value through other comprehensive income,* due beyond three months. They consist of 350 million euros (833 million euros at December 31, 2021) of italian treasury bonds and 691 million euros (682 million euros at December 31, 2021) of bonds purchased by the Parent with different maturities, all with an active market and consequently readily convertible into cash. The above government bonds represent investments in "Sovereign debt securities”.

- securities, classified as FVTPL - *Fair value through profit or loss*, due beyond three months. They are related to the investment made by the Brazil Business Unit for an equivalent value of 406 million euros (733 million euros at December 31, 2021) in monetary funds.

At December 31, 2022, Telecom Italia Finance S.A raised short-term capital (note "Financial liabilities (non-current and current)") with government and corporate bonds serving as collateral for a total value of 494 million euros by entering in repurchase agreements (“Repo”) expiring in the first months of the year 2023.

At December 31, 2022, the Parent has contracts of security lending with TIM S.p.A. for a total of 189,5 million euros of government bonds and with bank counterparties for 122,7 million euros of other bonds.
As per IFRS9, the assets have not been derecognized, being Telecom Italia Finance S.A. the Company which retains the risks and benefits associated with the position.

Cash and cash equivalents:

(millions of euros)	31/12/2022	31/12/2021
Liquid assets with banks, financial institutions and post offices	1.241	2.318
Other financial receivables (due within 3 months)	868	117
Securities other than investments (due within 3 months)	932	811
Total	**3.042**	**3.247**

For the purpose of the statement of cash flows, cash and cash equivalents comprise the following:

(millions of euros)	31/12/2022	31/12/2021
Liquid assets with banks, financial institutions and post offices	1.241	2.318
Other financial receivables (due within 3 months)	868	117
Securities other than investments (due within 3 months)	932	811
	3.042	**3.247**
Financial payables (due within 3 months)	-11	-8
Total	**3.030**	**3.239**

The different technical forms of investing available cash at December 31, 2022 had the following characteristics:

- maturities: all deposits have a maximum maturity date of three months;
- counterparty risk: deposits have been made with leading high-credit-quality banks and financial institutions with a rating of at least BBB according to Standard & Poor's with regard to Europe, and with leading local counterparts with regard to investments in South America;
- country risk: deposits have been made mainly by the Parent company in major European financial markets.

Other financial receivables (due within 3 months) refers to loans granted by the Parent to TIM Group companies. All loans are considered fully recoverable by the management.

Securities other than investments (due within 3 months) included 447 million euros (811 million euros at December 31, 2021) of Brazilian bank certificates of deposit (*Certificado de Depósito Bancário*) held by the Brazil Business Unit with premier local banking and financial institutions, 350 million euros of monetary portfolio securities and 135 million euros of Euro Commercial Papers, both subscribed by Telecom Italia Finance S.A.

Note 11 - Miscellaneous receivables and other non-current assets

(million euros)	31/12/2022	Of which Financial Instruments	31/12/2021	Of which Financial Instruments
Miscellaneous receivables	**516**	**262**	**380**	**121**
Other non-current assets	**14**	**—**	**13**	**—**
Prepaid expenses from customer contracts (contract assets)	5	—	4	—
Other prepaid expenses	9	—	9	—
Total	**531**	**262**	**393**	**121**

As at December 31, 2022 **Miscellaneous receivables** relate to the Brazil Business Unit for an amount of 516 million euros (380 million euros at December 31, 2021). They include receivables for court deposits of 245 million euros (113 million euros at December 31, 2021), non-current income tax receivables of 93 million euros (116 million euros at December 31, 2021) and receivables for indirect taxes totaling 152 million euros (137 million euros at December 31, 2021).
More specifically, the legal deposits included the deposit, at December 31, 2022 equal to 120 million euros, requested in October 2022 by the 7th Business Court of the Legal District of Rio de Janeiro (Brazil) of TIM S.A., as buyer of part of the mobile assets of the Oi Group. Further details are provided in the Note “Disputes and Pending Legal Actions, other information, commitments and guarantees”.

Other non-current assets include prepaid expenses related to the Brazil BU for 14 million euros (13 million euros at December 31, 2021) and is mainly represented by incremental costs related to sales commissions paid to partners for obtaining customer contracts arising from the adoption of IFRS 15, which are deferred to the result in accordance with the term of the contract and/or economic benefit, usually from 1 to 2 years.

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

Note 12 - Income taxes (current and deferred)

INCOME TAX RECEIVABLES

Non-current and current income tax receivables at December 31, 2022 amounted to 198 million euros (142 million euros at December 31, 2021) and related to the Brazil Business Unit.
Specifically, they consisted of:

- non-current receivables of 93 million euros (116 million at December 31, 2021) that include receivables of TIM S.A. relating to the decision of the Brazilian Supreme Federal Court on the non-collection of corporate income tax and social contributions on the monetary recalculation that uses the SELIC rate in cases of undue payment;
- current income tax receivables of 105 million euros (26 million euros at December 31, 2021).

DEFERRED TAX ASSETS AND DEFERRED TAX LIABILITIES

The net balance of 246 million euros at December 31, 2022 (85 million euros at December 31, 2021) was broken down as follows:

(million euros)	31/12/2022	31/12/2021
Deferred tax assets	246	85
Deferred tax liabilities	—	—
Total	**246**	**85**

Deferred taxes are all attributable to Brazil BU.

Since the presentation of deferred tax assets and liabilities in the financial statements takes into account the offsets by legal entity when applicable, the composition of the gross amounts before offsets is presented below:

(million euros)	31/12/2022	31/12/2021
Deferred tax assets	511	270
Deferred tax liabilities	-265	-185
Total	**246**	**85**

The temporary differences that made up this line item at December 31, 2022 and 2021, as well as the movements during 2022 were as follows:

(million euros)	31/12/2021	Recognized in profit or loss	Recognized in equity	Exchange differences and other changes	31/12/2022
Deferred tax assets	**270**	**80**	**—**	**161**	**511**
Tax loss carryforwards	35	-23	—	5	17
Provision for bad debts	38	-8	—	5	36
Provisions	124	60	—	15	199
Other deferred tax assets	73	50	—	135	258
	—				—
Deferred tax liabilities	**-185**	**-56**	**—**	**-24**	**-265**
Derivatives	-23	-3	—	-3	-29
Business combinations - for step-up of net assets in excess of tax basis	-52	2	—	-7	-57
Accelerated depreciation	-74	-46	—	-9	-128
Other deferred tax liabilities	-37	-9	—	-5	-51
Total Net deferred tax assets (liabilities)	**85**	**24**	**—**	**137**	**246**

Other changes in other deferred tax assets include 135 million euros related to the entrance into the consolidation scope of the mobile telephone assets of Oi Móvel S.A. acquired by the TIM Group in April 2022. For further details, see the note "Business combinations".

At December 31, 2022, the Group had unused tax loss carryforwards of 925 million euros with the following expiration dates:

Year of expiration	(million euros)
2023	—
2024	—
2025	—
2026	—
2027	—
Expiration after 2027	28
Without expiration	897
Total unused tax loss carryforwards	**925**

Unused tax loss carryforwards considered in the calculation of deferred tax assets amounted to 65 million euros at December 31, 2022 (113 million euros at December 31, 2021) and referred to the Brazil Business Unit. Deferred tax assets are recognized when it is considered probable that taxable income will be available in the future against which the tax losses can be utilized. On the other hand, deferred tax assets of 198 million euros (213 million euros at December 31, 2021) have not been recognized on 794 million euros (855 million euros at December 31, 2021) of tax loss carryforwards since, at this time, their recoverability is not considered probable.
At December 31, 2022, deferred tax liabilities have not been recognized on approximately 0,2 billion euros (0,2 billion euros at December 31, 2021) of tax-suspended reserves and undistributed earnings, because the Group is in a position to control the timing of the distribution of those reserves and it is probable that those accumulated earnings will not be distributed in the foreseeable future.

INCOME TAX PAYABLES

Income tax payables amounted to 14 million euros (30 million euros at December 31, 2021) and are mainly related to Brazil Business Unit. They were broken down as follows:

(million euros)	31/12/2022	31/12/2021
Non-Current	—	—
Current	14	30
Total	**14**	**30**

INCOME TAX INCOME (EXPENSE)

Details are as follows:

(million euros)	Year 2022	Year 2021
Current taxes for the year	56	-16
Net difference in prior year estimates	—	—
Total current taxes	**56**	**-16**
Deferred taxes	-24	55
Total income tax for the year	**32**	**39**

The reconciliation between the theoretical tax expense, and the effective tax expense for the years ended December 31, 2022 and 2021 is the following:

(million euros)	Year 2022	Year 2021
Profit (loss) before tax	**254**	**476**
Theoretical income tax	**63**	**119**
Income tax effect on increases (decreases) in variations		
Tax losses of the year not considered recoverable	-15	-21
Different rate compared to theoretical rate in force in Luxembourg and other changes	13	-31
Brazil: incentive on investments	-29	-28
Total effective income tax recognized in income statement	**32**	**39**

During the year 2022 tax losses of 15 million euros have been considered not recoverable in relation to tax loss carryforwards whose recoverability is not considered probable.

The tax rate in force in Luxembourg as at December 31, 2022 and 2021 is 24,94%.

Note 13 - Inventories

(million euros)	31/12/2022	31/12/2021
Finished goods	42	32
Total	**42**	**32**

The inventories mainly consist of cell phones and tablets, accessories and prepaid cards and are related to Brazil Business Unit.

Note 14 - Trade and miscellaneous receivables and other current assets

(million euros)	31/12/2022	Of which Financial Instruments	31/12/2021	Of which Financial Instruments
Trade receivables	**654**	**654**	**512**	**512**
Receivables from customers	575	575	465	465
Receivables from other telecommunications operators	79	79	47	47
Miscellaneous receivables	**157**	**4**	**273**	**3**
Other current assets	**54**	**4**	**46**	**2**
Prepaid expenses from customer contracts (contract assets)	31	4	23	2
Other prepaid expenses	23	—	24	—
Total	**865**	**662**	**832**	**517**

The aging of financial instruments included in "Trade and miscellaneous receivables and other current assets" at December 31, 2022 and 2021 was as follows:

					overdue:		
(million euros)	**31/12/2022**	Total non-overdue	Total overdue	0-90 days	91-180 days	181-365 days	More than 365 days
Net trade and miscellaneous receivables and other current assets	662	567	95	68	6	21	—

					overdue:		
(million euros)	**31/12/2021**	Total non - overdue	Total overdue	0-90 days	91-180 days	181-365 days	More than 365 days
Net trade and miscellaneous receivables and other current assets	517	448	69	45	1	23	—

The increase in the non-overdue portion (79 million euros) includes a negative exchange adjustment of approximately 61 million euros.

Overdue receivables increased of 66 million of euros compared to December 31, 2021, including a positive exchange difference of around 9 million euros.

As at December 31, 2022 **Trade receivables** related to the Brazil Business Unit amounted to 654 million euros (512 million euros at December 31, 2021) and are stated net of the provision for expected credit losses of 105 million euros (118 million euros at December 31, 2021).

Movements in the provision for expected credit losses were as follows:

(million euros)	2022	2021
At January 01	**118**	**102**
Provision charges to the income statement	115	86
Utilization and decreases	-152	-71
Change in scope	7	—
Exchange differences and other changes	17	1
At December 31	**105**	**118**

As at December 31, 2022 **Miscellaneous receivables** amounted to 157 million euros (273 million euros at December 31, 2021) and did not include provisions for bad debts (same as at December 31, 2021).

Details are as follows:

(million euros)	31/12/2022	31/12/2021
Advances to suppliers	6	8
Tax receivables	120	240
Sundry receivables	32	25
Total	**157**	**273**

As at December 31, 2022 **Tax receivables** included 120 million euros (240 million euros at December 31, 2021) referring to the Brazil Business Unit and related to local indirect taxes. Specifically, they include the recognition of current tax receivables resulting from the favorable outcome of tax disputes relating to the inclusion of the indirect tax ICMS (tax on the movement of goods and services) in the basis for calculating the PIS/COFINS contribution, the use of which began as early as the end of 2019.

Other current assets include the current portion of prepaid expenses related to the Brazil BU and is mainly represented by incremental costs related to sales commissions paid to partners for obtaining customer contracts arising from the adoption of IFRS 15, which are deferred to the result in accordance with the term of the contract and/or economic benefit, usually from 1 to 2 years.

Other prepaid expenses refers to the Brazil BU and are essentially related to the deferral of service costs.

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

Note 15 - Share capital issued

As at December 31, 2022 the authorized, issued and fully paid capital of 1.818.691.978,50 euros (1.818.691.978,50 euros at December 31, 2021) is represented by 185.960.325 ordinary shares (185.960.325 at December 31, 2021) with a nominal value of EUR 9,78 per share.

As at December 31, 2022 and 2021 the Parent is 100% held by TIM S.p.A.

There has not been any movement in Share Capital in the 2022..

Note 16 - Financial liabilities (non-current and current)

Non-current and current financial liabilities (gross financial debt) were broken down as follows:

(million euros)	31/12/2022	31/12/2021
Non-current financial liabilities	**4.230**	**3.630**
Financial payables (medium/long-term):	**1.972**	**1.815**
Bonds	1.331	1.276
Amounts due to banks	348	259
Other financial payables	294	279
Finance lease liabilities (medium/long-term)	**1.900**	**1.233**
Other financial liabilities (medium/long-term):	**358**	**582**
Non-hedging derivatives	358	582
Current financial liabilities	**1.640**	**1.544**
Financial payables (short-term):	**1.143**	**1.289**
Bonds	73	74
Amounts due to banks	1.048	1.198
Other financial payables	23	18
Finance lease liabilities (short-term)	**406**	**201**
Other financial liabilities (short-term):	**91**	**54**
Hedging derivatives	—	—
Non-hedging derivatives	91	54
Total financial liabilities (gross financial debt)	**5.870**	**5.174**

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

The breakdown of gross financial debt by effective interest rate bracket, excluding the effect of any hedging instruments, is provided below:

(million euros)	31/12/2022	31/12/2021
Up to 2,5%	740	1.438
From 2,5% to 5%	246	339
From 5% to 7,5%	552	233
From 7,5% to 10%	1.012	1.012
Over 10%	2.744	1.433
Accruals/deferrals, MTM and derivatives	575	718
Total	**5.870**	**5.174**

Following the use of derivative hedging instruments, on the other hand, the gross financial debt by nominal interest rate bracket is:

(million euros)	31/12/2022	31/12/2021
Up to 2,5%	640	1.000
From 2,5% to 5%	7	272
From 5% to 7,5%	320	—
From 7,5% to 10%	1.111	1.252
Over 10%	3.216	1.931
Accruals/deferrals, MTM and derivatives	575	718
Total	**5.870**	**5.174**

Details of the maturities of financial liabilities – at nominal repayment amount as at December 31, 2022:

	maturing by 31/12 of the year						
(millions of euros)	2023	2024	2025	2026	2027	After 2027	Total
Bonds	—	—	—	—	—	1.303	1.303
Loans and other financial liabilities	187	200	68	—	—	408	864
Finance lease liabilities	—	678	—	—	59	1.529	2.266
Total	**187**	**878**	**68**	**—**	**59**	**3.240**	**4.432**
Current financial liabilities	826	—	—	—	—	—	826
Total	**1.013**	**878**	**68**	**—**	**59**	**3.240**	**5.258**

Details of the maturities of financial liabilities – at nominal repayment amount as at December 31, 2021:

	maturing by 31/12 of the year						
(millions of euros)	2022	2023	2024	2025	2026	After 2026	Total
Bonds	—	—	—	—	—	1.268	1.268
Loans and other financial liabilities	67	—	193	18	—	342	621
Finance lease liabilities	—	—	230	—	—	1.203	1.434
Total	**67**	**—**	**423**	**18**	**—**	**2.813**	**3.322**
Current financial liabilities	1.119	—	—	—	—	—	1.119
Total	**1.186**	**—**	**423**	**18**	**—**	**2.813**	**4.441**

The following tables list the bonds issued by the Group, expressed at the nominal repayment amount, net of bond repurchases, and also at market value as at December 31, 2022:

Currency	Amount (millions)	Nominal repayment amount at 31/12/2022 (millions of euros)	Coupon	Issue date	Maturity date	Issue price (%)	Market price at 31/12/2022 (%)	Market value at 31/12/2022 (millions of euros)
Bonds issued by Telecom Italia Finance and guaranteed by TIM S.p.A.								
Euro	1.015	1.015	7,750 %	24/01/2003	24/01/2033	109,646[*]	105,749	1.073
Bonds issued by TIM S.A.								
BRL	1.600	288	IPCA+4,1682%	15/06/2021	15/06/2028	100	100,000	288
Total								**1.361**

[*]Weighted average issue price for bonds issued with more than one tranche.

Amounts due to banks (medium/long term) of 348 million euros (259 million euros at December 31, 2021) Increased by 88 million euros, mainly as net result of new loans and the transfer to the current portion.

As at December 31, 2022 **Other financial payables (medium/long-term)** amounted to 294 million euros (279 million euros at December 31, 2021) corresponding to Telecom Italia Finance loan of 20.000 million Japanese yens expiring in 2029.

Finance lease liabilities (medium/long-term) totalled 1.900 million euros at December 31, 2022 (1.233 million euros at December 31, 2021). With reference to the financial lease liabilities recognized, in 2022 and 2021 the following is noted:

(million euros)	31/12/2022	31/12/2021
Principal reimbursements	295	86
Cash out interest portion	224	62
Total	**519**	**148**

The lease amounts considered low-value or short-term (less than 12 months) were recognized as rental expenses and totaled 7 million euros in 2022 (6 million euros in 2021).

Non-hedging derivatives relating to items classified as current and non-current financial liabilities totaled 449 million euros (636 million euros at December 31, 2021). These include the measurement of derivatives which, although put into place for hedging purposes, do not possess the formal requisites to be considered as such under IFRS and derivatives put in place in the framework of the activity of centralizing all the banking exposures of the TIM Group (further details are provided in the Note “Derivatives”).

Short-term amounts due to banks totaled 1.048 million euros (1.198 million euros at December 31, 2021) and included 228 million euros of the current portion of medium/long-term amounts due to banks. As at December 31, 2022 the item includes 494 million euros of short-term capital raised by entering in repurchase agreements (“Repo”).

Further details on Financial Instruments are provided in the Note “Supplementary disclosure on financial instruments”.

Note 17 - Net financial debt

The following table shows the net financial debt at December 31, 2022 and December 31, 2021, determined in accordance with the provisions of the “Guidelines on disclosure requirements under the Prospectus Regulation” issued by the ESMA (European Securities & Markets Authority) on March 4, 2021 (ESMA32-382-1138).

(million euros)		31/12/2022	31/12/2021
Liquid assets with banks, financial institutions and post offices	a)	1.241	2.318
Other cash and cash equivalents	b)	932	811
Securities other than investments	c)	1.446	2.249
Liquidity	**d=a+b+c**	**3.620**	**5.378**
Current financial debt (including debt instruments, but excluding the current portion of non-current financial debt)	e)	831	1.120
Current portion of non-current financial debt	f)	738	379
Current financial debt	**g=e+f**	**1.569**	**1.499**
Net current financial debt	**h=g-d**	**-2.051**	**-3.879**
Non-current financial debt (excluding the current part and debt instruments)	i)	2.395	1.642
Debt instruments	j)	1.331	1.276
Trade payables and other non-current debt [**]	k)	116	79
Non-current financial debt	**l=i+j+k**	**3.842**	**2.998**
Total net financial debt as per ESMA guidelines 32-382-1138	**m=h+l**	**1.790**	**-881**
Trade payables and other non-current debt		-116	-79
Loans and other non-current financial receivables		-1.164	-1.182
Non-current financial receivables arising from lease contracts		-37	-34
Loans and other current financial receivables		-959	-201
Current financial receivables arising from lease contracts		**-6**	**-5**
Subtotal	**n)**	**-2.283**	**-1.501**
Net financial debt carrying amount[*]	**o=m+n**	**-492**	**-2.382**

[*] For details of the effects of related party transactions on net financial debt, see the specific table in the Note "Related party transactions".
[**] Mainly includes the payables of the Brazil Business Unit for the purchase and renewal of telecommunications licenses (55 million euros), also including the payable due to Entidade Administradora da Conectividade de Escolas (EACE) for the development of certain infrastructural projects in Brazil in connection with the assignment of the rights of use of frequencies for 5G services.

The following additional disclosures are provided in accordance with IAS 7:

(million euros)		Cash movements		Non-cash movements			
	31/12/2021	Receipts and/or issues	Payments and/or reimbursements	Differences exchange rates	Fair value changes	Other changes	31/12/2022
Financial payables (medium/long-term):	**1.983**	**288**	**-104**	**81**	**—**	**36**	**2.284**
Bonds	1.350	—	—	35	—	18	1.404
Amounts due to banks	345	288	-104	39	—	8	576
Other financial payables	289	—	—	7	—	10	305
of which short-term portion	*168*	—	*-104*	*7*	—	*241*	*312*
Finance lease liabilities (medium/long-term):	**1.434**	**184**	**-301**	**168**	**—**	**820**	**2.306**
of which short-term portion	*201*	—	*-301*	*12*	—	*493*	*406*
Other financial liabilities (medium/long-term):	**635**	**—**	**—**	**91**	**-285**	**5**	**445**
Hedging derivatives relating to hedged items classified as non-current assets/liabilities of a financial nature	—	—	—	—	—	—	—
Non-hedging derivatives	634	—	—	91	-285	5	445
of which short-term portion	*53*	—	—	*8*	*16*	*11*	*88*
Financial payables (short-term):	**1.122**	**7**	**-296**	**—**	**-2**	**3**	**835**
Amounts due to banks	1.112	—	-296	—	—	3	820
Non-hedging derivatives	1	4	—	—	-2	—	4
Other financial payables	8	3	—	—	—	—	11
Total financial liabilities (gross financial debt)	**5.174**	**480**	**-701**	**340**	**-287**	**864**	**5.870**
	—						—
Positive hedging derivatives (current and non-current)	2	—	—	—	—	—	2
Positive non-hedging derivatives (current and non-current)	753	3	—	89	-288	17	574
Total	**4.419**	**476**	**-701**	**251**	**1**	**847**	**5.294**

(million euros)		Cash movements		Non-cash movements			
	31/12/2020	Receipts and/or issues	Payments and/or reimbursements	Differences exchange rates	Fair value changes	Other changes	31/12/2021
Financial payables (medium/long-term):	**1.613**	**481**	**-269**	**16**	**—**	**141**	**1.983**
Bonds	1.086	252	—	2	—	11	1.350
Amounts due to banks	368	230	-269	18	—	-2	345
Other financial payables	160	—	—	-4	—	133	289
of which short-term portion	*340*	—	*-269*	*11*	—	*86*	*168*
Finance lease liabilities (medium/long-term):	**1.315**	**136**	**-186**	**12**	**—**	**157**	**1.434**
of which short-term portion	*166*	—	*-186*	*2*	—	*220*	*201*
Other financial liabilities (medium/long-term):	**634**	**—**	**—**	**65**	**-67**	**3**	**635**
Hedging derivatives relating to hedged items classified as non-current assets/liabilities of a financial nature	—	—	—	—	—	—	—
Non-hedging derivatives	634	—	—	65	-67	3	634
of which short-term portion	*19*	—	—	—	*26*	*9*	*53*
Financial payables (short-term):	**231**	**890**	**—**	**—**	**—**	**—**	**1.122**
Amounts due to banks	225	887	—	—	—	—	1.112
Non-hedging derivatives	—	1	—	—	—	—	
Other financial payables	6	2	—	—	—	—	8
Total financial liabilities (gross financial debt)	**3.794**	**1.508**	**-455**	**93**	**-67**	**301**	**5.174**
Positive hedging derivatives (current and non-current)	1	—	—	—	1	—	2
Positive non-hedging derivatives (current and non-current)	768	—	-10	31	-52	15	753
Total	**3.024**	**1.508**	**-445**	**62**	**-16**	**286**	**4.419**

Note 18 - Financial risk management

Financial risk management objectives and policies of the Group

The Group is exposed to the following financial risks in the ordinary course of its business operations:

- market risk: stemming from changes in interest rates and exchange rates in connection with financial assets that have been originated and financial liabilities that have been assumed;
- credit risk: representing the risk of non-fulfilment of obligations undertaken by the counterparty with regard to the liquidity investments of the Group;
- liquidity risk: connected with the need to meet short-term financial commitments.

These financial risks are managed by:

- the establishment, at TIM Group level, of guidelines for directing operations;
- the work of a TIM Group committee that monitors the level of exposure to market risks in accordance with pre-established general objectives;
- the identification of the most suitable financial instruments, including derivatives, to reach pre-established objectives;
- the monitoring of the results achieved;
- the exclusion of the use of financial instruments for speculative purposes.

The policies for the management and the sensitivity analyses of the above financial risks by the Group are described below.

Identification of risks and analysis

The Group is exposed to market risks as a result of changes in interest rates and exchange rates in the markets in which it operates, or has bond issues, principally Europe and Latin America.

The financial risk management policies of the Group are directed towards diversifying market risks, hedging exchange rate risk in full and minimizing interest rate exposure by an appropriate diversification of the portfolio, which is also achieved by using carefully selected derivative financial instruments.

At TIM Group level is defined an optimum composition of its debt structure by balancing fixed and variable-rates and uses derivative financial instruments to achieve that debt composition. In consideration of the Group's operating activities, the optimum combination of medium/long-term non-current financial liabilities has been identified, on the basis of the nominal value, in the 65%-85% range for the fixed-rate component and in the 15%-35% range for the variable-rate component.

In managing market risk, the Group mainly uses the following financial derivatives:

- Interest Rate Swaps (IRSs), to modify the profile of the original exposure to interest rate risks on loans and bonds, both fixed and variable;
- Cross Currency and Interest Rate Swaps (CCIRSs) and Currency Forwards, to convert loans and bonds issued in currencies other than the functional currencies of the operating companies to the functional currencies of the operating companies.

Derivative financial instruments may be designated as fair value hedges for managing exchange rate and interest rate risk on instruments denominated in currencies other than euro and for managing interest rate risk on fixed-rate loans. Derivative financial instruments are designated as cash flow hedges when the objective is to pre-set the exchange rate of future transactions and the interest rate.

All derivative financial instruments are entered into with banking and financial counterparties with at least a "BBB-" rating from Standard & Poor's or an equivalent rating and a non-negative outlook. The exposure to the various market risks can be measured by sensitivity analyses, as set forth in IFRS 7. This analysis illustrates the effects produced by a given and assumed change in the levels of the relevant variables in the various reference markets (exchange rates, interest rates and prices) on finance income and expenses and, at times, directly on equity. The sensitivity analysis was performed based on the suppositions and assumptions indicated below:

- sensitivity analyses were performed by applying reasonably likely changes in the relevant risk variables to the amounts in the Consolidated Financial Statements at December 31, 2022;
- changes in value of fixed-rate financial instruments, other than derivatives, produced by changes in the reference interest rates, generate an impact on profit only when, in accordance with IAS 39 and IFRS 9, they are accounted for at their fair value through profit and loss. All fixed-rate instruments, which are accounted for at amortized cost, are not subject to interest rate risk as defined by IFRS 7;
- in the case of fair value hedge relationships, fair value changes of the underlying hedged item and of the derivative instrument, due to changes in the reference interest rates, offset each other almost entirely in the income statement for the year. As a result, these financial instruments are not exposed to interest rate risk. The Group has not applied fair value hedge accounting for the year ended 31 December 2022;
- changes in the value of designated financial instruments in a cash flow hedge relationship, produced by changes in interest rates, generate an impact on the debt level and on equity; accordingly, they are included in this analysis;

- the changes in value, produced by changes in the reference interest rates, of variable-rate financial instruments, other than derivatives, which are not part of a cash flow hedge relationship, generate an impact on the finance income and expenses for the year; accordingly, they are included in this analysis.

For the purpose of the Group’s capital management, capital includes issued capital, convertible preference shares, share premium and all other equity reserves attributable to the equity holders of the parent.
The primary objective of the Group’s capital management is to maximise the shareholder value. The Group manages its capital structure and makes adjustments in light of changes in economic conditions and the requirements of the financial covenants. To maintain or adjust the capital structure, the Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. The Group monitors capital using a gearing ratio.

Exchange rate risk – Sensitivity analysis
At December 31, 2022 (and also at December 31, 2021), the exchange rate risk of the Group's positions denominated in currencies other than the functional currency of the single companies' Financial Statements was hedged in full. Accordingly, a sensitivity analysis was not performed on the exchange rate risk.

Interest rate risk – Sensitivity analysis
The change in interest rates on the variable component of payables and liquidity may lead to higher or lower finance income and expenses, while changes in the level of the expected interest rate affect the fair value measurement of the Group's derivatives. In particular:

- with regard to derivatives that convert the liabilities contracted by the Group to fixed rates (cash flow hedging), in line with international accounting standards that regulate hedge accounting, the fair value (mark-to-market) measurement of such instruments is set aside in a specific unavailable Equity reserve. The combined change of the numerous market variables to which the mark-to-market calculation is subject between the transaction inception date and the measurement date renders any assumption about the trend of the variables of little significance. As the contract expiration date approaches, the accounting effects described will gradually be absorbed until they cease to exist;
- if at December 31, 2022 the interest rates in the various markets in which the Group operates had been 100 basis points higher/lower compared to the actual rates, then higher/lower finance expenses, before the income tax effect, would have been recognized in the Consolidated income statement of 16 million euros (2 million euros at December 31, 2021).

Credit risk
Exposure to credit risk for the Group consists of possible losses that could arise from the failure of either commercial or financial counterparties to fulfill their assumed obligations. To measure this risk over time for impairment of financial assets (trade receivables due from customers included), the Group uses the expected credit loss model. Such exposure mainly stems from general economic and financial factors, the potential occurrence of specific insolvency situations of some borrowers and other more strictly technical-commercial or administrative factors. The Group's maximum theoretical exposure to credit risk is represented by the carrying amount of the financial assets and trade receivables recorded in the financial statements.
Risk related to trade receivables is managed using customer scoring and analysis systems. For specific categories of trade receivables, the Group also makes use of factoring, mainly on a "non-recourse" basis.
Provision charges for bad debts are recorded for specific credit positions that have an element of individual risk. On credit positions that do not have such characteristics, provision charges are recorded by customer segment according to the average uncollectibility estimated on the basis of statistics. Further details are provided in the Note "Trade and miscellaneous receivables and other current assets".
Financial assets other than trade receivables are written down for impairment on the basis of a general model which recognizes expected credit losses over the following 12 months, or over the residual life of the asset in the event of a substantial worsening of its credit risk. The expected credit loss is calculated based on the default probability and the percentage of credit that cannot be recovered in the event of a default (the loss given default). The model adopted to calculate the expected credit loss is based on the Bloomberg Credit Risk Model, a model developed by Bloomberg which, starting from Merton's distance-to-default (“DD”) concept, estimates the probability of default together with the recovery rate. At the same time, the loss given default is defined as the non-recoverable component of the post-default financial asset. In particular, the DD - based on balance sheet data - is enriched with a series of additional information by country (macroeconomic, risk), business sector and individual company, as well as accounting adjustments aimed at ensuring uniformity of the model's outputs; finally, through a non-linear function of the DD, the default probability is obtained.
Moreover, as regards credit risk relating to the asset components which contribute to the determination of "Net financial debt", it should be noted that the management of the Group's liquidity is guided by conservative criteria and is principally based on the following:

- money market management: the investment of temporary excess cash resources;

- bond portfolio management: the investment of medium-term liquidity, as well as the improvement of the average yield of the assets.

In order to mitigate the risk of the non-fulfillment of the obligations undertaken by the counterparty, deposits of the European companies are made with leading banking and financial institutions rated no lower than investment grade and with a non-negative outlook, and investments by the companies in South America are made with leading local counterparties. Moreover, deposits are made generally for periods of less than three months. With regard to other temporary investments of liquidity, there is a bond portfolio in which the investments have a low risk level. All investments have been carried out in compliance with the Guidelines on "Management and control of financial risk" established by the ultimate Parent entity TIM S.p.A.
In order to minimize credit risk, the Group also pursues a diversification policy for its investments of liquidity and allocation of its credit positions among different banking counterparties. Consequently, there are no significant positions with any one single counterparty.

Liquidity risk
The Group pursues the objective of achieving an "adequate level of financial flexibility" which is expressed by maintaining a current treasury margin to cover the refinancing requirements at least for the next 12 months with irrevocable bank lines and liquidity.
Current financial assets at December 31, 2022, together with unused committed bank lines, are sufficient to fully cover the Group's financial liabilities due at least for the next 24 months.

The following tables report the contractual cash flows, not discounted to present value, related to gross financial debt at nominal repayment amounts and the interest flows, determined using the terms and the interest and exchange rates in place at December 31, 2022 and December 31, 2021. The portions of principal and interest of the hedged liabilities includes both the disbursements and the receipts of the related hedging derivatives.

Financial liabilities – Maturities of contractually expected disbursements as at December 31, 2022:

	maturing by 31/12 of the year:						
(million euros)	2023	2024	2025	2026	2027	After 2027	Total
Bonds							
Principal	—	—	—	—	—	1.303	1.303
Interest Portion	86	86	87	85	83	473	901
Loans and other financial liabilities							
Principal	222	241	47	28	28	297	864
Interest Portion	45	41	23	20	18	28	176
Finance lease liabilities							—
Principal	366	790	217	132	105	657	2.266
Interest Portion	265	218	176	138	122	563	1.481
Non-current financial liabilities							
Principal	**588**	**1.031**	**264**	**160**	**134**	**2.256**	**4.432**
Interest Portion	**396**	**346**	**285**	**243**	**223**	**1.064**	**2.558**
Current financial liabilities							
Principal	**826**	**—**	**—**	**—**	**—**	**—**	**826**
Interest Portion	**23**	**—**	**—**	**—**	**—**	**—**	**23**
Total Financial liabilities							
Principal	**1.414**	**1.031**	**264**	**160**	**134**	**2.256**	**5.258**
Interest Portion	**419**	**346**	**285**	**243**	**223**	**1.064**	**2.581**

Derivatives on financial liabilities – Contractually expected interest flows as at December 31, 2022:

	maturing by 31/12 of the year:						
(million euros)	2023	2024	2025	2026	2027	After 2027	Total
Disbursements	1	1	1	1	1	2	7
Receipts	-1	-1	-1	-1	-1	-3	-9
Hedging derivatives – net disbursements (receipts)	**—**	**—**	**—**	**—**	**—**	**-1**	**-2**
Disbursements	444	311	183	266	252	930	2.385
Receipts	-385	-276	-161	-260	-255	-946	-2.283
Non-Hedging derivatives – net disbursements (receipts)	**59**	**35**	**22**	**7**	**-3**	**-17**	**102**
Total net disbursements (receipts)	**58**	**35**	**22**	**6**	**-3**	**-18**	**100**

Financial liabilities – Maturities of contractually expected disbursements as at December 31, 2021:

	maturing by 31/12 of the year:						
(million euros)	2022	2023	2024	2025	2026	After 2026	Total
Bonds							
Principal	—	—	—	—	—	1.268	1.268
Interest Portion	101	99	95	96	83	552	1.025
Loans and other financial liabilities							
Principal	82	17	191	21	16	293	621
Interest Portion	38	36	22	16	15	37	166
Finance lease liabilities							—
Principal	200	200	209	109	99	616	1.433
Interest Portion	33	32	30	29	27	130	280
Non-current financial liabilities							
Principal	**282**	**217**	**400**	**130**	**116**	**2.177**	**3.322**
Interest Portion	**172**	**166**	**147**	**141**	**125**	**720**	**1.471**
Current financial liabilities							
Principal	**1.119**	**—**	**—**	**—**	**—**	**—**	**1.119**
Interest Portion	**4**	**—**	**—**	**—**	**—**	**—**	**4**
Total Financial liabilities							
Principal	**1.401**	**217**	**400**	**130**	**116**	**2.177**	**4.441**
Interest Portion	**176**	**166**	**147**	**141**	**125**	**720**	**1.476**

Derivatives on financial liabilities – Contractually expected interest flows as at December 31, 2021:

	maturing by 31/12 of the year:						
(million euros)	2022	2023	2024	2025	2026	After 2026	Total
Disbursements	1	1	1	1	1	3	8
Receipts	-1	-1	-1	-1	-1	-4	-10
Hedging derivatives – net disbursements (receipts)	**—**	**—**	**—**	**—**	**—**	**-1**	**-2**
Disbursements	263	182	256	145	221	790	1.857
Receipts	-235	-159	-241	-132	-214	-808	-1.790
Non-Hedging derivatives – net disbursements (receipts)	**29**	**23**	**14**	**13**	**7**	**-19**	**67**
Total net disbursements (receipts)	**28**	**23**	**14**	**12**	**7**	**-20**	**64**

Market value of derivative instruments
In order to determine the fair value of derivatives, the Group uses various valuation models.
The mark-to-market calculation is determined by the present value discounting of the interest and notional future contractual flows using market interest rates and exchange rates.
The notional amount of IRSs does not represent the amount exchanged between the parties and therefore is not a measurement of credit risk exposure which, instead, is limited to the amount of the difference between the interest rates paid/received.
The market value of CCIRSs, on the other hand, also depends on the differential between the reference exchange rate at the date of signing the contract and the exchange rate at the date of measurement, since CCIRSs involve the exchange of the reference interest and principal, in the respective denomination currencies.
Options are measured according to the Black & Scholes or Binomial models and involve the use of various measurements factors, such as: the lifetime horizon of the option, the risk-free rate of return, current price, volatility and any cash flows (e.g. dividend) of the underlying financial instrument, and the exercise price.

Note 19 - Derivatives

The hedge accounting rules provided by IAS 39 continued to be applied for derivatives.

Derivative financial instruments are used by the Group to hedge its exposure to foreign exchange rate risk, to manage interest rate risk and to diversify the parameters of debt so that costs and volatility can be reduced to within predetermined operational limits.
Derivative financial instruments existing at December 31, 2022 are principally used to manage debt positions. They include interest rate swaps (IRSs) used to reduce the interest rate exposure of fixed-rate bank loans and bonds, as well as cross currency and interest rate swaps (CCIRSs), currency forwards and foreign exchange options to convert the loans/receivables secured in currencies different from the functional currencies of the various Group companies.
IRSs transactions provide for or may entail, at specified maturity dates, the exchange of flows of interest, calculated on the notional amount, at the agreed fixed or variable rates.
The same also applies to CCIRSs transactions which, in addition to the settlement of periodic interest flows, may provide for the exchange of principal, in the respective currencies of denomination, at maturity and possibly spot.

In carrying out its role of providing financial assistance to TIM Group companies, Telecom Italia Finance aggregates all the exposure with some banking counterparties in just one entity. As a consequence, the Group has derivative contracts signed with banks and analogous intercompany derivative contracts with other TIM Group companies for a notional amount of 3.478 million euros (3.432 million euros at December 31, 2021).
The balance of asset and liability measurements of these contracts is equal to zero.

The following tables show the derivative financial instruments of the Group at December 31, 2022 and December 31, 2021, by type. For CCIRS, the notional amount refers to the contractual value in euros, for IRS in a currency other than the euro, the value is indicated at the market exchange rate.

Type(million euros)	Hedged risk	Notional amount at 31/12/2022	Notional amount at 31/12/2021	Spot Mark-to-Market (Clean Price) at 31/12/2022	Spot Mark-to-Market (Clean Price) at 31/12/2021
Cross Currency and Interest Rate Swap [*]	Interest rate risk and currency exchange rate risk	139	139	2	1
Total Cash Flow Hedge Derivative [**]		**139**	**139**	**2**	**1**
Total Non-Hedge Accounting Derivatives [***]		**4.712**	**4.406**	**99**	**105**
Total Telecom Italia Finance Group Derivatives		**4.850**	**4.545**	**100**	**106**

[*] For this instrument contracts no exchange of notional amounts has been agreed with the counterparties.
[**] On the liability expiring on 2029, derivatives are both accounted in CFH and non-hedge; accordingly, although it is a single issue, the notional amount of derivatives is included in both the CFH and non-hedging groupings.
[***] Telecom Italia Finance Group entered into some derivatives on other TIM Group companies request. Since TIF Group has a contract with an external counterparty and the opposite contract with an affiliated company (outside the perimeter of consolidation), the MTM exposure on these positions is neutral and there is no risk connected. The notional amounts are exposed for all these positions.

The MTM of Non-Hedge Accounting Derivatives is mainly related to the value of the right held by TIM Brasil to subscribe shares of the Brazilian C6 Bank of 112 million euros on the basis of a commercial agreement signed by the two companies in March 2020.

The hedging of cash flows by cash flow hedges was considered highly effective and at December 31, 2022 led to recognition in equity of unrealized gains of 0,3 million euros (0,5 million euros as at December 31, 2021).

The transactions hedged by cash flow hedges will generate cash flows and produce economic effects in the income statement in the periods indicated in the following table:

Currency of denomination	Notional amount in currency of denomination (million)	Start of period	End of period	Rate applied	Interest period
USD	186	Jan-22	Oct-29	0,75 %	Semiannually

The method selected to test the effectiveness retrospectively and, whenever the main terms do not fully coincide, prospectively, for cash flow hedge derivatives and fair value hedge derivatives is the Volatility Risk Reduction (VRR) Test. This test assesses the ratio between the portfolio risk (meaning the derivative and the item hedged) and the risk of the hedged item taken individually. In essence, the portfolio risk must be significantly lower than the risk of the h edged item.
No material ineffective portion has been recognized in the income statement from designated cash flow hedge derivatives during 2022.

Note 20 - Supplementary disclosures on financial instruments

Measurement at fair value

For the purposes of the comparative information between the carrying amounts and the fair value of financial instruments, required by IFRS 7, for the Parent’s bond included in non-current financial liabilities, the fair value is directly observable in the financial markets, as it is a financial instrument that, due to its size and diffusion among investors, is commonly traded on the relevant markets (see the Note "Financial Liabilities (non-current and current)"). For other types of financing, the fair value has been assumed to be equal to nominal repayment amount (level 3) since most of them are at variable rate . For the majority of financial assets, their carrying amount constitutes a reasonable approximation of their fair value since these are short-term investments that are readily convertible into cash or loans towards Ultimate Parent Company and other TIM Group companies.
The fair value measurement of the financial instruments of the Group is classified according to the three levels set out in IFRS 7. In particular, the fair value hierarchy introduces three levels of input:

- Level 1: quoted prices in active market;
- Level 2: prices calculated using observable market inputs;
- Level 3: prices calculated using inputs that are not based on observable market data.

Further details on Level 2 inputs are provided in the Note "Derivatives".

The tables below provide additional information on the financial instruments, including the hierarchy level for each class of financial asset/liability measured at fair value at December 31, 2022.

The assets and liabilities at December 31, 2022 are presented based on the categories established by IFRS 9.

Key for IFRS 9 categories

	Acronym
Financial assets measured at:	
Amortized Cost	AC
Fair Value Through Other Comprehensive Income	FVTOCI
Fair Value Through Profit or Loss	FVTPL
Financial liabilities measured at:	
Amortized Cost	AC
Fair Value Through Profit or Loss	FVTPL
Hedge Derivatives	HD
Not applicable	n/a

Classification and fair value hierarchy of financial instruments measured at fair value as at December 31, 2022:

					Levels of hierarchy	
(millions of euros)		IFRS 9 Categories	Note	Value at 31/12/2022	Level1	Level2
ASSETS						
Non-current Assets	**a)**			**504**	**—**	**504**
Other non-current financial assets:						
Hedging derivatives		HD[*]	[10]	2	—	2
Non-hedging derivatives		FVTPL	[10]	503	—	503
Current Assets	**b)**			**1.518**	**1.446**	**72**
Securities other than investments, measured at:						
Fair value through other comprehensive income		FVTOCI	[10]	1.040	1.040	—
Fair value through profit or loss		FVTPL	[10]	406	406	—
Other current financial assets:						
Non-hedging derivatives		FVTPL	[10]	71	—	71
Total (a+b)				**2.022**	**1.446**	**576**
LIABILITIES						
Non-current liabilities	**c)**			**358**	**—**	**358**
Non-hedging derivatives		FVTPL	[16]	358	—	358
Current liabilities	**d)**			**91**	**—**	**91**
Hedging derivatives		HD[*]	[16]	—	—	—
Non-hedging derivatives		FVTPL	[16]	91	—	91
Total (c+d)				**449**	**—**	**449**

[*] Derivative measured at fair value through other comprehensive income.

Classification and fair value hierarchy of financial instruments measured at fair value as at December 31, 2021:

					Levels of hierarchy	
(millions of euros)		IFRS 9 Categories	Note	Value at 31/12/2021	Level1	Level2
ASSETS						
Non-current Assets	**a)**			**711**	**—**	**711**
Other non-current financial assets:						
Hedging derivatives		HD[*]	[10]	1	—	1
Non-hedging derivatives		FVTPL	[10]	710	—	710
Current Assets	**b)**			**2.293**	**2.249**	**44**
Securities other than investments, measured at:						
Fair value through other comprehensive income		FVTOCI	[10]	1.515	1.515	—
Fair value through profit or loss		FVTPL	[10]	733	733	—
Other current financial assets:						
Non-hedging derivatives		FVTPL	[10]	44	—	44
Total (a+b)				**3.004**	**2.249**	**756**
LIABILITIES						
Non-current liabilities	**c)**			**582**	**—**	**582**
Non-hedging derivatives		FVTPL	[14]	582	—	582
Current liabilities	**d)**			**54**	**—**	**54**
Non-hedging derivatives		FVTPL	[14]	54	—	54
Total (c+d)				**636**	**—**	**636**

[*] Derivative measured at fair value through other comprehensive income.

For financial assets measured at FVTOCI, the profit/(loss) recognized in Other components of the Consolidated Statements of Comprehensive Income were recognized within the scope of the Reserve for financial assets measured at fair value through other comprehensive income.

Carrying amount and fair value of financial instruments not measured at fair value as at December 31, 2022:

					Levels of hierarchy		
(millions of euros)	IFRS 9 Categories	Note	Value at 31/12/2022	Fair Value at 31/12/2022	Level1	Level3	Amounts recognized in the financial statements pursuant to IFRS 16
ASSETS							
Non-current Assets	**a)**		**1.464**	**1.464**	**—**	**1.426**	**37**
Other financial receivables	AC	[10]	1.164	1.164	—	1.164	—
Miscellaneous receivables	AC	[11]	262	262	—	262	—
Financial receivables for lease contracts	n/a	[10]	37	37		—	37
Current Assets	**b)**		**3.800**	**3.800**	**—**	**3.795**	**6**
Other short-term financial receivables	AC	[10]	91	91	—	91	—
Cash and cash equivalents	AC	[10]	3.042	3.042	—	3.042	—
Trade and miscellaneous receivables	AC	[14]	662	662	—	662	—
Financial receivables for lease contracts	n/a	[10]	6	6	—	—	6
Total (a+b)			**5.264**	**5.264**	**—**	**5.221**	**43**
LIABILITIES							
Non-current liabilities	**c)**		**3.872**	**3.903**	**1.073**	**929**	**1.900**
Financial payables	AC	[16]	1.972	2.003	1.073	929	—
Finance lease liabilities	n/a	[16]	1.900	1.900	—	—	1.900
Current liabilities	**d)**		**2.639**	**2.639**	**—**	**2.233**	**406**
Financial payables	AC	[16]	1.143	1.143	—	1.143	—
Trade and miscellaneous payables and other current liabilities	AC	[23]	1.090	1.090	—	1.090	—
Finance lease liabilities	n/a	[16]	406	406	—	—	406
Total (c+d)			**6.511**	**6.542**	**1.073**	**3.163**	**2.306**

Carrying amount and fair value of financial instruments not measured at fair value as at December 31, 2021:

					Levels of hierarchy		
(millions of euros)	IFRS 9 Categories	Note	Value at 31/12/2021	Fair Value at 31/12/2021	Level1	Level3	Amounts recognized in the financial statements pursuant to IFRS 16
ASSETS							
Non-current assets			**1.336**	**1.336**	**—**	**1.303**	**34**
Other financial receivables	AC	[10]	1.182	1.182	—	1.182	—
Miscellaneous receivables	AC	[11]	121	121	—	121	—
Financial receivables for lease contracts	n/a	[10]	34	34		—	34
(a)							
Current assets			**3.853**	**3.853**	**—**	**3.848**	**5**
Other short-term financial receivables	AC	[10]	84	84	—	84	—
Cash and cash equivalents	AC	[10]	3.247	3.247	—	3.247	—
Trade and miscellaneous receivables	AC	[12]	517	517	—	517	—
Financial receivables for lease contracts	n/a	[10]	5	5	—	—	5
(b)							
Total (a+b)			**5.189**	**5.189**	**—**	**5.150**	**38**
LIABILITIES							
Non-current liabilities			**3.048**	**2.841**	**1.355**	**253**	**1.233**
Financial payables	AC	[14]	1.815	1.608	1.355	253	—
Finance lease liabilities	n/a	[14]	1.233	1.233	—	—	1.233
(c)							
Current liabilities			**2.528**	**2.528**	**—**	**2.327**	**201**
Financial payables	AC	[14]	1.289	1.289	—	1.289	—
Trade and miscellaneous payables and other current liabilities	AC	[20]	1.038	1.038	—	1.038	—
Finance lease liabilities	n/a	[14]	201	201	—	—	201
(d)							
Total (c+d)			**5.576**	**5.369**	**1.355**	**2.580**	**1.434**

Gains and losses by IFRS 9 category - Year 2022

(million euros)	IFRS 9 Categories	Net gains/(losses) 31/12/2022	of which interest
Amortized Cost	AC	-89	63
Fair Value Through Profit or Loss	FVTPL	3	17
Fair Value Through Other Comprehensive Income	FVTOCI	-46	-44
Total		**-132**	**36**

Gains and losses by IFRS 9 category - Year 2021

(million euros)	IFRS 9 Categories	Net gains/(losses) 31/12/2021	of which interest
Amortized Cost	AC	-77	27
Fair Value Through Profit or Loss	FVTPL	25	—
Fair Value Through Other Comprehensive Income	FVTOCI	5	—
Total		**-47**	**27**

Note 21 - Provisions

(million euros)	**31/12/2021**	Increase	Taken to income	Used directly	Exchange differences and other changes	**31/12/2022**
Provision for taxation and tax risks	**68**	7	—	-4	14	**86**
Provision for restoration costs	**5**	—	—	—	47	**52**
Provision for legal disputes	**84**	49	—	-29	11	**115**
Other provisions	**1**	—	—	—	—	**1**
Total	**158**	**56**	**—**	**-33**	**72**	**253**
of which:						
non-current portion	**157**	56	—	-33	72	**252**
current portion	**1**	—	—	—	—	**1**

Provision for taxation and tax risks Increased by 17 million euros compared to December 31, 2021, mainly due to the exchange rate effect of the period (9 million euros). The balance at December 31, 2022 reflects provisions and uses made for the Brazil Business Unit.

The **provision for restoration costs** refers to the provision for the costs expected to be incurred for the restoration of leased properties and sites used in the mobile sector and for the dismantling of assets; it entirely refers to the Brazil Business Unit.

Provision for legal disputes includes the provision for litigation with employees and other counterparties and refers to the Brazil Business Unit. The uses consisted of 29 million euros and resulted from settlement agreements reached.

So far, Management has not identified nor considered any material impacts of climate change on assumptions used (e.g. for impairment tests, fair value measurement, etc.) and on the Group's financial reporting (e.g. provisions, fixed assets, etc.).

Note 22 - Miscellaneous payables and other non-current liabilities

(million euros)	31/12/2022	31/12/2021
Other deferred income	120	109
Other	59	8
Total	**179**	**118**

Other deferred income includes the non-current portion of approximately 113 million euros as at December 31, 2022 (108 million euros as at December 31, 2021) of deferred gain on the sale and lease back of the telecommunication towers of the Brazil Business Unit.

Note 23 - Trade and miscellaneous payables and other current liabilities

(million euros)	31/12/2022	Of which Financial Instruments	31/12/2021	Of which Financial Instruments
Trade payables	**904**	**904**	**1.001**	**1.001**
Payables to suppliers	864	864	978	978
Payables to other telecommunication operators	41	41	23	23
Tax payables	**102**	**—**	**78**	**—**
Miscellaneous payables	**565**	**48**	**244**	**34**
Payables for employee compensation	45		34	
Payables to social security agencies	14		11	
Payables for TLC operating fee	323		164	
Dividends approved, but not yet paid to shareholders	48	48	34	34
Other	134	134	—	—
Provisions for risks and charges for the current portion expected to be settled within 1 year	1		1	
Other current liabilities	**70**	**4**	**33**	**3**
Deferred revenues from customer contracts (Contract liabilities)	5	3	5	3
Customer-related items	32	—	16	—
Other deferred income	11		11	
Advances received	2		1	
Other current liabilities	20	—	—	—
Total	**1.641**	**955**	**1.356**	**1.038**

Trade payables amounting to 904 million euros as at December 31, 2022 (1.001 million euros at December 31, 2021) are mainly referred to the Brazil Business Unit. The decrease on December 31, 2021 is connected with the partial payment of payables connected with the November 2021 purchase of 5G licenses.

According to IAS 1, trade payables are part of the working capital used in the entity's normal operating cycle and are classified as current liabilities even if they are due to be settled more than twelve months after the reporting period. At December 31, 2022, trade payables due beyond 12 months totaled 59 million euros (73 million euros at December 31, 2021) and are mainly represented by payables of the Brazil Business Unit for the purchase and renewal of telecommunications licenses, also including the payable due to Entidade Administradora da Conectividade de Escolas (EACE) for the development of certain infrastructural projects in Brazil in connection with the assignment of the rights of use of frequencies for 5G services.

Tax payables amounting to 102 million euros as at December 31, 2022 are entirely referred to the Brazil Business Unit (78 million euros at December 31, 2021).

Miscellaneous payables includes the debt position of the Brazil Business Unit connected with the contractual obligations linked to the acquisition of the mobile assets of the Oi Group (134 million euros). Further details are provided in the Note "Disputes and pending legal actions, other information, commitments and guarantees".

Other current liabilities includes current contract 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 complied with the performance obligation, whether through the sale of equipment/devices or the provision of services to the client and customer-related items, that include trade payables following contractual relationships, such as the payable for prepaid traffic and the subscription charges charged in advance.

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

Note 24 - Disputes and pending legal actions, other information, commitments and guarantees

A description is provided below of the most significant judicial, arbitration and tax disputes in which the Group companies are involved as at December 31, 2022, as well as those that came to an end during the financial year.

SIGNIFICANT DISPUTES AND PENDING LEGAL ACTIONS

International tax and regulatory disputes
As of December 31, 2022, the companies belonging to the Brazil Business Unit were involved in tax or regulatory disputes, the outcome of which is estimated as a possible loss totalling around 18,2 billion reais (around 3,3 billion euros, 16,3 billion reais at December 31, 2021). The main types of litigation are listed below, classified according to the tax to which they refer.

Federal taxes
In relation to the federal level of taxation, the following disputes should be noted:
- disallowance of the tax effects of the merger between the companies of the TIM Brasil Group;
- denial of the SUDENE regional tax benefit, due to alleged irregularities in the management and reporting of the benefit itself;
- challenges regarding offsetting against previous tax losses;
- further challenges regarding the tax deductibility of the amortization of goodwill;
- imposition of income tax on certain types of exchange rate differences;
- imposition of withholding taxes on certain types of payments to foreign entities (for example, payments for international roaming);
- further challenges regarding offsets made between taxes payable and group company credit positions.

Overall, the risk for these cases, considered to be possible, amounts to 3,3 billion reais (about 0,6 billion euros, 3,1 billion reais at December 31, 2021).

State taxes
Within the scope of the state levy, there are numerous challenges regarding ICMS, and in particular:
- challenges concerning the reduction of the tax base due to discounts granted to customers, as well as challenges regarding the use of tax credits declared by group companies, with respect to the return of loaned telephone handset, and following the detection of contract frauds to the detriment of the companies;
- subjection of some fees owed to group companies and classified by them as fees for services other than telecommunications to ICMS;
- challenges over the use of the "PRO-DF" tax benefit originally granted by some States, and subsequently declared unconstitutional (the challenge refers to the actual credit due to ICMS, declared by the TIM Cellular on the basis of the aforementioned tax benefits);
- challenges relating to the use of ICMS credits claimed by Group Companies as a result of the acquisition of tangible assets, and in relation to the supply of electricity to the Companies, as well as in application of the provisions on acting as a withholding agent;
- fines imposed on group companies for irregularities in tax return compliance;
- challenges of ICMS credits in relation to acting as a withholding agent, applicable when equipment is bought and distributed in different States;
- challenges of ICMS credits deriving from the “special credit” recognized by the company to its prepaid customers, against subsequent top-ups.

Overall, the risk for these cases, considered to be possible, amounts to 9,6 billion reais (about 1,7 billion euros, 8,8 billion reais at December 31, 2021).

Municipal taxes
Among disputes classified with a "possible" degree of risk, there are some relating to municipal taxes for a total amounting to around 1,6 billion reais (about 0,3 billion euros, 1,2 billion reais at December 31, 2021).

FUST and FUNTTEL
The main challenges about contributions to the regulatory body (Anatel), and in particular in terms of FUST and FUNTTEL, concern whether or not interconnection revenues should be subject to these contributions.

Overall, the risk for these cases, considered to be possible, amounts to 3,7 billion reais (around 0,7 billion euros, 3,2 billion reais at December 31, 2021).

Opportunity Arbitration

In May 2012, TIM and Telecom Italia International N.V. (now merged in Telecom Italia Finance) were served with a notice of arbitration proceedings brought by the Opportunity group, claiming compensation for damages allegedly suffered for presumed breach of a settlement agreement signed in 2005. Based on the claimant's allegations, the damages relate to circumstances that emerged in the criminal proceedings pending before the Milan Court regarding, inter alia, unlawful activities engaged in by former employees of TIM.
The investigatory phase having been completed, the hearing for oral discussion took place in November 2014, after which the parties filed their concluding arguments in preparation for the decision on the case.
In September 2015, the Board of Arbitration declared the proceedings closed, as the award was going to be filed.
In September 2016 the ICC Court notified the parties of its judgment, based on which the Court of Arbitration rejected all the claims made by the Opportunity group and decided that the legal costs, administrative costs and costs for expert witnesses should be split between the parties (the "2016 Arbitration Award").
In April 2017 the Opportunity group filed an appeal against the 2016 Arbitration Award before the Paris Court of Appeal.
In November 2017, TIM and Telecom Italia Finance received from the Secretariat of the ICC's International Court of Arbitration notice of a Request for Revision of the 2016 Arbitration Award, filed by the Opportunity group, asking for a new award. A Board of Arbitration was subsequently established.
In October 2018, TIM and Telecom Italia Finance requested proceedings with the Paris Court of Appeal to be suspended, in the light of proceedings pending with the Court of Arbitration of the International Chamber of Commerce to review the same 2016 Arbitration Award. In November 2018, the Paris Court of Appeal suspended the proceedings until the decision is taken by the Court of Arbitration in the review proceedings.
As regards the proceedings to review the 2016 Arbitration Award, in October 2019 the ICC held the discussion hearing in Paris. In August 2020, the Arbitration Court issued the award rejecting the Request for Revision presented by the Opportunity Group (the "2020 Arbitration Award"). In December 2020, the Opportunity group filed an appeal against the 2020 Arbitration Award before the Paris Court of Appeal. In May 2021 the Opportunity group asked the Paris Court of Appeal to summarize the proceedings brought against the 2016 Arbitration Award. Thereafter, the Opportunity Group, TIM and Telecom Italia Finance filed their briefs in the two proceedings pending before the Paris Court of Appeal, respectively against the 2016 Award and the 2020 Award. The Court of Appeal has scheduled the hearing for discussion of both proceedings for June 5, 2023.

TIM S.A. Arbitration proceedings no. 28/2021/SEC8

In March 2020, TIM S.A. concluded negotiations with C6 and, in April 2020, launched exclusive offers for TIM customers who had opened C6 bank accounts and used their services. As compensation for this contract, TIM S.A. receives commission for each account activated, as well as the option of obtaining an investment in the bank upon achieving certain targets connected to the number of active accounts.
The number of shares received for each target achieved varies throughout the contract term, with the initial percentages being more advantageous for TIM due to the greater effort required for a new digital company to take off.
Even with the project's success, differences between the partners resulted in the initiation of arbitration proceedings in 2021.
Arbitration proceedings no. 28/2021/SEC8 were filed with the Arbitration and Mediation Center of the Brazil-Canada Chamber of Commerce, by TIM S.A. against Banco C6 S.A., Carbon Holding Financeira S.A. and Carbon Holding S.A. through which the interpretation will be discussed of certain clauses of the contracts governing the partnership. In the event of losing, the partnership may be dissolved.

TIM S.A. - Arbitration proceedings connected with the acquisition of the Oi Group mobile telephone assets

On September 19, 2022, TIM S.A., the Brazilian subsidiary of the TIM Group, reported that the Buyers (TIM S.A., Telefônica Brasil S.A. and Claro S.A.) of the mobile telephone assets of Oi Móvel S.A. (the "Seller") had identified differences in the assumptions and calculation criteria, that, under the Share Purchase Agreement and Other Covenants ("SPA") justified proposing an amendment of the Adjusted Closing Price ("ACP").As far as TIM S.A. is concerned, the impact of such difference amounts approximately to 1,4 billion reais (0,3 billion euros). In addition to differences relating to the Adjusted Closing Price, others have also been identified relating to the contracts of Cozani (the company into which TIM S.A.'s share of the assets, rights and obligations of the Oi Móvel mobile telephone business, flowed) with companies supplying mobile infrastructure services (site/tower rental), which, under the terms of the SPA, give rise to indemnity by the Seller in TIM S.A.'s favor, of approximately 231 million reais (42 million euros). As a result of the differences found, TIM S.A. retained an amount of 634 million reais (116 million euros - 671 million reais at December 31, 2022).
On October 3, 2022, considering the Seller's express violation of the dispute resolution mechanisms provided for in the SPA, TIM S.A. communicated that the Buyers had no other alternative but to file an arbitration procedure with the Market Arbitration Chamber (Câmara de Arbitragem do Mercado) of B3 S.A. - Brasil, Bolsa, Balcão against the Seller to determine the effective amount of the adjustment to the Adjusted Closing Price, in accordance with the SPA.

On October 4, 2022, TIM S.A. was surprised by news published by the press and by a Material Fact released by the Seller that a preliminary decision had been handed down by the 7th Business Court of the Judicial District of Rio de Janeiro determining the deposit in court by the Buyers of approximately 1,53 billion reais (0,3 billion euros) – of which approximately 670 million reais (123 million euros) by TIM S.A. – in an account linked to the court-ordered reorganization process of Oi, where it will be safeguarded until a later decision by the arbitration court. Said deposit has already been made, remaining in an account linked to the Court pending the installation of the Court of Arbitration.
TIM S.A. has appealed against the decision and on October 17, 2022, the Superior Court of Justice, by monocratic judgment, rejected TIM S.A.'s appeal and that of the other Buyers. Therefore, on October 19, 2022, TIM S.A. paid the 7th Business Court of the Judicial District of Rio de Janeiro, the amount of 670 million reais (123 million euros) by way of guarantee.

COMMITMENTS AND GUARANTEES

TIM S.p.A. has provided to the Group the following guarantees:

(million euros)	31/12/2022	31/12/2021
Guarantee on bonds and other debts issued by the Group	1.157	1.168
Guarantee on derivatives financial instruments	26	180
Total	**1.183**	**1.348**

There are also surety bonds on the telecommunication services in Brazil for 684 million euros.

The Group has provided to Telecom Italia Capital (related party) a guarantee covering the full amount of a credit line amounting to 100 million euros, which represents the maximum credit risk exposure relating to this financial guarantee contract.

ASSETS GUARANTEEING FINANCIAL LIABILITIES

The special rate loan contracts granted by the Brazilian Development Bank BNDES (Banco Nacional de Desenvolvimento Econômico e Social) to TIM S.A. for a total value of 125 million euros are covered by specific covenants. In the event of non-compliance with the covenant obligations, BNDES will have a right to the income which transits on the bank accounts of the company.

Note 25 - Revenues

(million euros)	31/12/2022	31/12/2021
Equipment sales	129	88
Services	3.834	2.751
Total	**3.963**	**2.840**

Revenues only relates to the Brazil Business Unit.

Revenues from telecommunications services are presented gross of amounts due to other TLC operators, equal to 164 million euros in 2022 (129 million euros in 2021, 27,0% change), included in the costs of services.

For a breakdown of revenues by operating segment, reference should be made to the Note "Segment Reporting".

Note 26 - Other operating income

(million euros)	Year 2022	Year 2021
Late payment fees charged for telephone services	13	9
Other income	4	4
Total	**17**	**13**

Other operating income only relates to the Brazil Business Unit.

Note 27 - Purchase of goods and services

(million euros)	Year 2022	Year 2021
Purchase of raw materials and merchandise	**171**	**112**
Costs of services	**1.109**	**766**
Revenues due to other TLC operators	164	129
Commissions, sales commissions and other selling expenses	370	263
Advertising and promotion expenses	104	72
Professional and consulting services	173	90
Utilities	75	54
Maintenance	76	52
Outsourcing costs for other services	77	53
Mailing and delivery expenses for telephone bills, directories and other materials to customers	9	9
Other service expenses	60	43
Lease and rental costs	**289**	**161**
Rent of properties	78	47
TLC circuit lease rents and rents for use of satellite systems	191	99
Other lease and rental costs	20	15
Total	**1.568**	**1.039**

Note 28 - Employee benefits expenses

(million euros)	Year 2022	Year 2021
Wages and salaries	210	158
Social security expenses	59	47
Other employee benefits	43	32
Total	**312**	**238**

The employee benefits expenses are mainly related to the Brazil Business Unit for 311 million euros (237 million euros in 2021).

Note 29 - Other operating expenses

(million euros)	Year 2022	Year 2021
Write-downs and expenses in connection with credit management	115	86
Provision charges	31	33
TLC operating fees and charges	199	146
Indirect duties and taxes	10	10
Penalties, settlement compensation and administrative fines	—	—
Association dues and fees, donations, scholarships and traineeships	2	1
Sundry expenses	15	11
Total	**372**	**287**
of which, included in the supplementary disclosure on financial instruments	*115*	*86*

Further details on Financial Instruments are provided in the Note "Supplementary disclosure on financial instruments".

Note 30 - Internally generated assets

(million euros)	Year 2022	Year 2021
Intangible assets with a finite useful life	29	21
Tangible assets owned	64	51
Total	**93**	**72**

Internally generated assets mainly include labor costs of dedicated technical staff for software development and work in connection with the executive design, construction and testing of network installations.

Note 31 - Depreciation and amortization

(million euros)	Year 2022	Year 2021
Amortization of intangible assets with a finite useful life	**338**	**269**
Industrial patents and intellectual property rights	186	182
Concessions, licenses, trademarks and similar rights	147	87
Other intangible assets	4	1
Depreciation of tangible assets owned	**514**	**411**
Buildings (civil and industrial)	1	1
Plant and equipment	465	371
Other	48	39
Depreciation of right of use assets	**409**	**214**
Property	94	50
Plant and equipment	314	163
Other	1	1
Total	**1.260**	**895**

For further details refer to the Notes "Intangible assets with finite useful lives", "Tangible assets" and "Rights of use assets".

For a breakdown of depreciation and amortization by operating segment, reference should be made to the Note "Segment Reporting".

Note 32 - Gains/(losses) on disposals of non-current assets

(million euros)	Year 2022	Year 2021
Gains on disposals of non-current assets	**13**	**9**
Gains on the retirement/disposal of intangible and tangible assets	13	9
Losses on disposals of non-current assets	**—**	**(2)**
Losses on the retirement/disposal of intangible and tangible assets	—	(2)
Total	**13**	**6**

In 2022, the item posted a net gain of 13 million euros, connected with the ordinary asset renewal process.

Note 33 - Other income (expenses) from investments

(million euros)	Year 2022	Year 2021
Dividends from TIM S.p.A.	—	1
Sundry income (expense)	-3	—
Net gains on investments	—	119
Total	**-3**	**120**

In 2021, the item mainly included the net capital gain consequent to the dilution from 100% to 49% of the investment held in the Brazilian company I-Systems S.A. (119 million euros).

Note 34 - Finance income and expenses

FINANCE INCOME

(million euros)	31/12/2022	31/12/2021
Interest income and other finance income	**536**	**462**
Income from financial receivables, recorded in non-current assets	86	84
Interest income on bank and postal accounts	107	54
Interest income on trade accounts receivable	5	4
Income from securities other than investments measured at FVTOCI	16	7
Income other than the above:		
Interest income on financials leasing receivables	5	4
Exchange gains	59	107
Reversal of the Reserve for cash flow hedge derivatives to the income statement (interest rate component)	1	1
Income from non-hedging derivatives	198	160
Miscellaneous finance income	58	40
Positive fair value adjustments to non-hedging derivatives	**383**	**237**
Positive adjustments and reversal for impairment on financial assets	**1**	**9**
Total	**920**	**707**

FINANCE EXPENSES

(million euros)	31/12/2022	31/12/2021
Interest expenses and other finance expenses	**826**	**547**
Interest expenses and other costs relating to bonds	81	85
Interest expenses to banks	18	16
Interest expenses to others	12	11
Interest expenses on lease liabilities	247	135
Expenses other than the above:		
Financial commissions and fees	14	11
Exchange losses	59	65
Reversal of the Reserve for cash flow hedge derivatives to the income statement (interest rate component)	1	1
Charges from non-hedging derivatives	243	150
Miscellaneous finance expenses	150	74
Negative fair value adjustments to non-hedging derivatives	**401**	**268**
Negative adjustments for impairment on financial assets	**7**	**1**
Total	**1.233**	**816**

For greater clarity of presentation, the net effects relating to derivative financial instruments are summarized in the following table:

(million euros)	31/12/2022	31/12/2021
Exchange gains	59	107
Exchange losses	-59	-65
Net exchange gains and losses	**—**	**43**
Positive Reversal of the Reserve for cash flow hedge derivatives	1	1
Negative Reversal of the Reserve for cash flow hedge derivatives	-1	-1
Net effect of the Reversal of the Reserve of cash flow hedge derivatives to the income statement (interest rate component)	**—**	**—**
Income from non-hedging derivatives	198	160
Charges from non-hedging derivatives	-243	-150
Net result from non-hedging derivatives	-44	10
Net result from derivatives	**-44**	**10**
Positive fair value to non-hedging derivatives	383	237
Negative fair value adjustments to non-hedging derivatives	-401	-268
Net fair value adjustments to non-hedging derivatives	**-18**	**-31**
Positive adjustments and reversal for impairment on financial assets	1	9
Negative adjustments for impairment on financial assets	-7	-1
Net impairment on financial assets	**-6**	**8**

Note 35 - Segment reporting

SEGMENT REPORTING

Segment reporting is based on the following operating segments:
- Telecommunications (Brazil)
- Other Operations

Separate Consolidated Income Statements by Operating Segment

(million euros)	Brazil		Other Operations		Consolidated Total	
	31/12/2022	31/12/2021	31/12/2022	31/12/2021	31/12/2022	31/12/2021
Third-party revenues	3.963	2.840	—	—	3.963	2.840
Revenues by operating segment	**3.963**	**2.840**	**—**	**—**	**3.963**	**2.840**
Other income	17	13	—	—	17	13
Total operating revenues and other income	**3.980**	**2.853**	**—**	**—**	**3.980**	**2.853**
Purchase of goods and services	-1.562	-1.037	-6	-2	-1.568	-1.039
Employee benefits expenses	-311	-237	-1	-1	-312	-238
Other operating expenses	-367	-283	-4	-4	-372	-287
of which: write-downs and expenses in connection with credit management and provision charges	*-139*	*-113*	—	—	*-139*	*-113*
Change in inventories	6	-7	—	—	6	-7
Internally generated assets	93	72	—	—	93	72
EBITDA	**1.839**	**1.362**	**-11**	**-7**	**1.828**	**1.355**
Depreciation and amortization	-1.260	-895	—	—	-1.260	-895
Gains/(losses) on disposals of non-current assets	13	6	—	—	13	6
EBIT	**593**	**473**	**-11**	**-7**	**581**	**466**
Share of profits (losses) of equity investments valued using equity method					-11	-2
Other income (expenses) from investments					-3	120
Finance income					920	707
Finance expenses					-1.233	-816
Profit (loss) before tax					**254**	**476**
Income tax income (expense)					-32	-39
Profit (loss) for the year					**221**	**437**
Attributable to:						
Owners of the Parent					120	282
Non-controlling interests					102	155

Revenues by operating segment
The revenues only relate to the Brazil Business Unit.

Purchase of intangible and tangible assets by operating segment
Purchase of intangible and tangible assets only relates to the Brazil Business Unit.

Assets and liabilities by Operating Segment

(millions of euros)	Brazil		Other Operations		Consolidated Total	
	31/12/2022	31/12/2021	31/12/2022	31/12/2021	31/12/2022	31/12/2021
Non-current operating assets	7.970	5.332	—	1	7.971	5.333
Current operating assets	789	773	65	45	854	818
Total operating assets	**8.759**	**6.105**	**65**	**46**	**8.824**	**6.151**
Investments accounted for using the equity method					*277*	*254*
Unallocated assets					6.767	7.712
Total Assets					**15.868**	**14.117**
Total operating liabilities	**2.068**	**1.626**	**5**	**5**	**2.072**	**1.631**
Unallocated liabilities					*5.884*	*5.204*
Equity					7.911	7.282
Total Equity and Liabilities					**15.868**	**14.117**

Note 36 - Related party transactions

The following tables show the figures relating to related party transactions and the impact of those amounts on the Separate Consolidated Income Statement and Consolidated Statement of Financial Position.

Related party transactions, when not dictated by specific laws, were conducted at arm's length.

The effects on the individual line items of the Group's Separate Consolidated Income Statements for 2022 and 2021 are as follows:

Separate Consolidated Income Statement line items at 31/12/2022

(million euros)		Related Parties					
	Total	Associates, companies controlled by associates	Other related parties [*]	Pension funds	Key managers	Total related parties	% of financial statement item
Revenues	**3.963**	—	8		—	8	0,2
Other income	**17**	—	—		—	—	1,4
Purchase of goods and services	**1.568**	—	164		—	164	10,5
Employee benefits expenses	**312**	—	—	3	13	16	5,1
Other operating expenses	**372**	—	—	—	—	—	—
Finance income	**920**	—	298		—	298	32,4
Finance expenses	**1.233**	—	299	—	—	299	24,3

[*] TIM Group companies; Vivendi Group and companies belonging to the group that it belongs to; Cassa Depositi e Prestiti (CDP) and its subsidiaries and other related parties through Directors, Statutory Auditors and Key Managers.

Separate Consolidated Income Statement line items 2021

(million euros)		Related Parties					
	Total	Associates, companies controlled by associates	Other related parties [*]	Pension funds	Key managers	Total related parties	% of financial statement item
Revenues	**2.840**	—	2	—	—	2	0,1
Other income	**13**	—	—	—	—	—	2,0
Purchase of goods and services	**1.039**	—	61	—	—	61	5,8
Employee benefits expenses	**238**	—	—	4	8	11	4,6
Other operating expenses	**287**	—	—	—	—	—	—
Other income (expenses) from investments	**120**	—	120	—	—	120	100,0
Finance income	**707**	—	186		—	186	26,3
Finance expenses	**816**	—	225	—	—	225	27,5

[*] TIM Group companies; Vivendi Group and companies belonging to the group that it belongs to; Cassa Depositi e Prestiti (CDP) and its subsidiaries and other related parties through Directors, Statutory Auditors and Key Managers.

The effects on the individual line items of the consolidated statements of financial position at December 31, 2022 and December 31, 2021 are as follows:

Consolidated Statement of Financial Position line items at 31/12/2022

(million euros)	Total	Associates, companies controlled by associates	Other related parties [*]	Pension funds	Total related parties	% of financial statement item
Net financial debt	**-492**	**—**	**-1.841**	**—**	**-1.841**	**374,1**
Non-current financial assets	**-1.706**	**—**	**-1.220**	**—**	**-1.220**	**71,5**
Current financial assets	**-4.656**	**—**	**-973**	**—**	**-973**	**20,9**
Securities other than investments (current assets)	-1.446	—	—	—	—	**—**
Financial receivables and other current financial assets	-168	—	-105	—	-105	**62,6**
Cash and cash equivalents	-3.042	—	-868	—	-868	**28,5**
Non-current financial liabilities	**4.230**	**—**	**330**	**—**	**330**	**7,8**
Current financial liabilities	**1.640**	**—**	**22**	**—**	**22**	**1,4**
Other statement of financial position line items						
Trade and miscellaneous receivables and other current assets	**865**	—	4	—	4	**0,5**
Miscellaneous payables and other non-current liabilities	**179**	—	—	—	—	**—**
Trade and miscellaneous payables and other current liabilities	**1.641**	—	42	1	44	**2,7**

[*] TIM Group companies; Vivendi Group and companies belonging to the group that it belongs to; Cassa Depositi e Prestiti (CDP) and its subsidiaries and other related parties through Directors, Statutory Auditors and Key Managers.

Consolidated Statement of Financial Position line items at 31/12/2021

(million euros)	Total	Associates and companies controlled by associates	Other related parties [*]	Pension funds	Total related parties	% of financial statement item
Net financial debt	**-2.382**	**—**	**-1.184**	**—**	**-1.184**	49,7
Non-current financial assets	**-1.927**	—	**-1.403**	—	**-1.403**	**72,8**
Current financial assets	**-5.628**	—	**-209**	—	**-209**	**3,7**
Securities other than investments (current assets)	-2.249	—	—	—	—	—
Financial receivables and other current financial assets	-133	—	-91	—	-91	**68,7**
Cash and cash equivalents	-3.247	—	-117	—	-117	**3,6**
Non-current financial liabilities	**3.630**	—	**408**	—	**408**	**11,2**
Current financial liabilities	**1.544**	—	**20**	—	**20**	**1,3**
Other statement of financial position line items						
Trade and miscellaneous receivables and other current assets	**832**	—	15	—	16	**1,9**
Miscellaneous payables and other non-current liabilities	**118**	—	—	—	—	**—**
Trade and miscellaneous payables and other current liabilities	**1.356**	—	23	—	24	**1,8**

[*] TIM Group companies; Vivendi Group and companies belonging to the group that it belongs to; Cassa Depositi e Prestiti (CDP) and its subsidiaries and other related parties through Directors, Statutory Auditors and Key Managers.

TRANSACTIONS WITH PENSION FUNDS

The most significant amounts are summarized as follows:

Separate Consolidated Income Statement line items

(million euros)	31/12/2022	31/12/2021	Type of contract
Other pension funds	3	4	
Total employee benefits expenses	**3**	**4**	Contributions to pension funds

Consolidated Statement of Financial Position line items

(million euros)	31/12/2022	31/12/2021	Type of contract
Other pension funds	1	—	
Total trade and miscellaneous payables and other current liabilities	**1**	**—**	Payables for contributions to pension funds

REMUNERATION TO KEY MANAGERS

The remuneration to key managers in 2022 amounted to 13 million euros (8 million euros in 2021). The compensation of key Management personnel for services rendered is shown below:

(million euros)	31/12/2022	31/12/2021
Short-term benefits	7	5
Long-term benefits	—	—
Share-based payments remuneration	6	2
Total remuneration to key managers	**13**	**8**

The Group considers as key managers the statutory directors and the Board of Directors.

Note 37 - Equity compensation plans

The equity compensation plans in force at December 31, 2022 are used for attraction and retention purposes, and as a long-term incentive for the managers and employees of the Group.
However, it should be noted that these plans do not have any significant effect on the economic result or on the financial position or on cash flows at December 31, 2022.

A summary is provided below of the plans in place at December 31, 2022.

DESCRIPTION OF STOCK OPTION PLANS

TIM S.A. Stock Option Plan
On April 10, 2014, the General Meeting of Shareholders of Tim Participações S.A. (now incorporated into TIM S.A.) approved the long-term incentive plan for managers in key positions in the company and its subsidiaries. Exercise of the options is not subject to the achievement of specific performance targets, but the strike price is adjusted upwards or downwards during each year for which the plan is in force, according to the ranking of the Total Shareholder Return of the TIM S.A. shares with respect to a panel of peers (made up of companies in the Telecommunications, Information Technology and Media industry).
The vesting period is 3 years (a third per year), the options can be exercised for 6 years, and the company does not have the legal obligation to repurchase or liquidate the options in cash, or in any other form.

- Year 2014

On September 29, 2014, the grantees of the options were granted the right to purchase a total of 1.687.686 shares. At December 31, 2022, there are no options that can be exercised. Out of the total attributed, 1.558.043 options have been canceled (due to withdrawal of the participants from the company or for expiry of the exercise period), and 129.643 options have been exercised.

- Year 2015

On October 16, 2015, the grantees of the options were granted the right to purchase a total of 3.355.229 shares. As of December 31, 2022, 100% of the options were considered as vested, and there are no options that can be exercised. Of the total options granted, 1.646.080 were canceled by participants leaving the company. All of the remaining balance (amounting to 1.709.149 options) has been exercised.

- Year 2016

On November 8, 2016, the grantees of the options were granted the right to purchase a total of 3.922.204 shares. At December 31, 2022, 100% of the options were considered as vested. Of the total options granted, 1.727.424 were canceled by participants leaving the company. All of the remaining balance (amounting to 2.194.780 options) have been exercised.

DESCRIPTION OF OTHER COMPENSATION PLANS

TIM S.A. - Long Term Incentive Plan 2018-2020
On April 19, 2018, the General Meeting of Shareholders of TIM Participações S.A. (now incorporated into TIM S.A.) approved the long-term incentive plan for managers in key positions in the company. The plan aimed to reward participants with shares issued by the company, subject to specific temporal and performance conditions. The portion of shares linked to performance (70%) is granted 1/3 each year, if the performance target is achieved; the remaining portion of shares (30%) is granted 3 years after allocation (restricted share). The vesting period is 3 years (with annual measurement) and the company does not have the legal obligation to repurchase or liquidate the shares in cash or in any other form.
The plan – in addition to transferring shares to beneficiaries – also includes the possibility of rewarding participants through the settlement of the amount corresponding in cash.

- Year 2018

On April 20, 2018, plan beneficiaries were granted the right to receive a total of 849.932 shares, of which 594.954 performance shares restricted to performance conditions and with gradual vesting over 3 years and 254.978 restricted shares, with a vesting period of 3 years.

At December 31, 2022, 100% of the rights assigned were considered as vested.

• Year 2019
On July 30, 2019, plan beneficiaries were granted the right to receive a total of 930.662 shares, of which 651.462 performance shares restricted to performance conditions and with gradual vesting over 3 years and 279.200 restricted shares, with a total vesting period of 3 years.

Three vesting periods ended on December 31, 2022:
- In 2020, in compliance with the results approved on July 29, 2020, 309.557 shares were transferred to beneficiaries, of which 209.349 relating to the original volume accrued, 83.672 granted according to the degree to which objectives had been achieved and 16.536 shares as a result of the dividends distributed during the period.
- In 2021, in compliance with the results approved on July 26, 2021, 309.222 shares were transferred to beneficiaries, of which 207.859 relating to the original volume accrued, 78.111 discounted according to the degree to which objectives had been achieved and 23.252 shares for dividends distributed during the period.
- In 2022, in compliance with the results approved on April 26, 2022, 618.495 shares were transferred to beneficiaries, of which 419.188 relating to the original volume accrued, 137.064 discounted according to the degree to which objectives had been achieved and 62.243 shares for dividends distributed during the period. For participants transferred to other Group companies, as per the Plan rules, payment in cash was considered of the amount corresponding to 11.574 shares (7.842 relating to the original volume accrued, 2.537 acknowledged according to the degree to which the objectives had been achieved and 1.195 due to dividends distributed during the period).

At December 31, 2022, of the total assigned of 930.662 shares, 86.424 had been canceled due to the beneficiaries having left the company and and 1.237.274 shares had been transferred to beneficiaries (836.396 relating to the original volume accrued, 298.847 from performance achieved and 102.031 for payment of dividends in shares) and 11.574 shares had been valued and paid in cash (7.842 relating to the original volume accrued, 2.537 from performance achieved and 1.195 for payment of dividends in shares), thereby completing the 2019 concession.

• Year 2020
On April 14, 2020, plan beneficiaries were granted the right to receive a total of 796.054 shares, of which 619.751 performance shares restricted to performance conditions and with gradual vesting over 3 years and 176.303 restricted shares, with a total vesting period of 3 years.

Two vesting periods ended on December 31, 2022:
- In 2021, in compliance with the results approved on May 5, 2021, 267.145 shares were transferred to beneficiaries, of which 206.578 relating to the original volume accrued, 51.634 granted according to the degree to which objectives had been achieved and 8.933 shares as a result of the dividends distributed during the period.
- In 2022, in compliance with the results approved on April 26, 2022, in July 337.937 shares were transferred to beneficiaries, of which 252.024 relating to the original volume accrued, 63.029 granted according to the degree to which objectives had been achieved and 22.884 shares as a result of the dividends distributed during the period. In addition, for participants transferred to other Group companies, as per the Plan rules, payment in cash was considered in June of the amount corresponding to 3.478 shares (2.593 relating to the original volume accrued, 649 acknowledged according to the degree to which the objectives had been achieved and 236 due to dividends distributed during the period).

At December 31, 2022, of the total assigned of 796.054 shares, 74.019 had been canceled due to the beneficiaries having left the company and 270.623 shares had been transferred to beneficiaries (209.171 related to the original volume vested, 52.283 recognized on the basis of performance achieved and 9.169 for effect of dividends distributed during the period). In July, 337.937 shares will be transferred to beneficiaries, of which 252.024 relating to the original volume accrued, 63.029 granted according to the degree to which the objectives had been achieved and 22.884 shares as a result of dividends distributed during the period, thereby leaving a balance of 264.481 shares that could be accrued at period end.

TIM S.A. - Long Term Incentive Plan 2021-2023
On March 30, 2021, the General Meeting of Shareholders of TIM S.A. approved the long-term incentive plan for managers in key positions in the company. The plan aims to reward participants with shares issued by the company, according to specific time (restricted shares) and performance (performance shares) conditions. The vesting period is 3 years and the company does not have the legal obligation to repurchase or liquidate the

shares in cash or in any other form. The plan – in addition to transferring shares to beneficiaries – also includes the possibility of rewarding participants through the settlement of the amount corresponding in cash.

• Year 2021
On May 05, 2021, plan beneficiaries were granted the right to receive a total of 3.431.610 shares, of which 3.173.142 performance shares restricted to performance conditions and with gradual vesting over 3 years and 258.468 restricted shares, with a total vesting period of 3 years.

In 2021, the Special Grant was added to the traditional plan, a further extraordinary concession with the aim of encouraging the closure of the Oi purchase operation in Brazil as well as the success of the subsequent integration operations.

Of the total 3.431.610 shares granted, 1.151.285 relate to the traditional grant (with 892.817 performance shares and 258.468 restricted shares) and 2.280.325 refer to the Special Grant.

On December 31, 2022 the first vesting period ended.

- In 2022, in compliance with the results approved on April 26, 2022, in July 572.608 shares were transferred to beneficiaries, of which 463.608 relating to the original volume accrued, 87.605 granted according to the degree to which objectives had been achieved and 21.395 shares as a result of the dividends distributed during the period. In addition, for participants transferred to other Group companies, as per the Plan rules, payment in cash was considered in June of the amount corresponding to 3.486 shares (2.883 relating to the original volume accrued, 473 acknowledged according to the degree to which the objectives had been achieved and 130 due to dividends distributed during the period).
- Special Grant: in compliance with the results approved on April 26, 2022, 601.936 shares were transferred to beneficiaries in July, of which 579.451 relating to the original volume accrued and 22.485 shares as a result of the dividends distributed during the period.

At December 31, 2022, of the total assigned of 3.431.610 shares, 361.515 had been canceled due to the beneficiaries having left the company and 3.486 shares had been transferred to beneficiaries through payment in cash, given the results of the first vesting period of the performance shares. In July, 1.174.544 shares will be transferred to beneficiaries, of which 1.043.059 relating to the original volume accrued, 87.605 granted according to the degree to which the objectives had been achieved and 43.880 shares as a result of dividends distributed during the period, thereby leaving a balance of 2.073.792 shares that could be accrued at period end.

TIM S.A. - Long Term Incentive Plan 2022-2024
On April 26, 2022, the General Meeting of Shareholders of TIM S.A. approved the long term incentive plan for managers in key positions in the company. The plan aims to reward participants with shares issued by the company, according to specific time (restricted shares) and performance (performance shares) conditions. The vesting period is 3 years and the company does not have the legal obligation to repurchase or liquidate the shares in cash or in any other form. The plan in addition to transferring shares to beneficiaries also includes the possibility of rewarding participants through the settlement of the amount corresponding in cash.

• Year 2022
On April 26, 2022, plan beneficiaries were granted the right to receive a total of 1.227.712 shares, of which 927.428 performance shares restricted to performance conditions and with gradual vesting over 3 years and 300.284 restricted shares, with a vesting period of 3 years.

As at December 31, 2022, the first vesting period had not yet concluded and 44.565 shares had been canceled due to beneficiaries leaving the Company.

CALCULATION OF FAIR VALUE MEASUREMENT OF THE GRANTED OPTIONS AND RIGHTS

Parameters used for the assignments of TIM S.A.

Plans/Parameters	Exercise price (reais)	Nominal value (reais)	Volatility (%)	Period	Risk-free interest rate
Stock option plan 2014	13,42	n/a	44,60	6 years	10,66% per annum
Stock option plan 2015	8,45	n/a	35,50	6 years	16,10% per annum
Stock option plan 2016	8,10	n/a	36,70	6 years	11,73% per annum
2018 PS/RS Plan	n/a	14,41	n/a	3 years	n/a
2019 PS/RS Plan	n/a	11,28	n/a	3 years	n/a
2020 PS/RS Plan	n/a	14,40	n/a	3 years	n/a
2021 PS/RS Plan	n/a	12,95	n/a	3 years	n/a
2022 PS/RS Plan	n/a	13,23	n/a	3 years	n/a

The parameters are characteristic of a stock option plan, considering the use of fair value appropriate only for Stock Option Plans.

Note 38 - Other information

EXCHANGE RATE USED TO TRANSLATE FOREIGN OPERATIONS

	Period-end exchange rates		Average exchange rates for the period	
	(statements of financial position)		(income statements and statements of cash flows)	
Local currency against 1 EUR	31/12/2022	31/12/2021	31/12/2022	31/12/2021
BRL (Brazilian real)	5,56520	6,32047	5,43993	6,35936
USD (U.S. dollar)	1,06660	1,13260	1,05335	1,18285
JPY (Japan Yen)	140,66000	130,38000	138,02515	129,86490
GBP (Pound sterling)	0,88693	0,84028	0,85268	0,85970
CHF (Swiss franc)	0,98470	1,03310	1,00475	1,08136

Source: Data processed by the European Central Bank, Reuters and major Central Banks.

RESEARCH AND DEVELOPMENT

Costs for research and development activities are represented by external costs, labor costs of dedicated staff and depreciation and amortization. Details are as follows:

(million euros)	31/12/2022	31/12/2021
Capitalized development costs	29	21
Total research and development costs	**29**	**21**

AUDITOR'S FEES

The following schedule reports the fees due to Ernst & Young for the audit of financial statements:

(thousands of euros)	31/12/2022	31/12/2021
Audit services	1.775	865
Verification services with issue of certification	—	41
Other assurance services	80	17
Total fees due to EY network for the audit and other services	1.855	**923**
Out of pocket	81	51
Total	1.936	**974**

Note 39 - Events subsequent to December 31, 2022

Payment of Interest on Equity

In January 2023, TIM S.A paid Interest on Capital (IOC) related to the fiscal year ending on December 31, 2022 and approved on September 12,2022 and December 12, 2022 according to the following schedule:

Payment Date	Reais per share
31/01/2023	0,101211247
24/01/2023	0,187955005

Note 40 - List of companies of the Telecom Italia Finance Group

Company name	Head office	Currency	Share Capital	% Ownership	% of voting [*]	Held by
PARENT COMPANY						
Telecom Italia Finance	Luxembourg	EUR	1.818.691.979			
SUBSIDIARIES CONSOLIDATED LINE-BY-LINE						
Brazil Business Unit						
• Cozani RJ Infraestructura e Rede de Telecomunicações S.A.	Rio de Janeiro	BRL	2.993.889.243	100,0000		TIM S.A.
• TIM Brasil Serviços & Partecipações S.A.	Rio de Janeiro	BRL	8.227.356.500	99,9999 0,0001		Telecom Italia Finance TIM S.p.A.
• TIM S.A.	Rio de Janeiro	BRL	13.477.890.508	66,5882 0,0165	66,5885	TIM Brasil Serviços & Partecipações S.A. TIM S.A.
ASSOCIATES ACCOUNTED FOR USING THE EQUITY METHOD						
I-System S.A.	Rio de Janeiro	BRL	1.794.287.995	49,0000		TIM S.A.
TI Audit Compliance Latam S.A. (in liquidation)	Rio de Janeiro	BRL	1.500.000	69,9996 30,0004		TIM S.p.A. TIM Brasil Serviços & Partecipações S.A.

[*] In addition to the percentage ownership of share capital, the percentage of voting rights in the ordinary shareholders' meeting is presented, if different from the percentage holding of share capital.

Certification of the Consolidated Financial Statements pursuant to Luxembourg Transparency Law

Pursuant to paragraph 3 of Luxembourg's Transparency Law, the undersigned Biagio Murciano, Managing Director of the Company, to the best of his knowledge, hereby declares that the above financial statements prepared in accordance with IFRS legal and regulatory requirements as adopted by EU give a true and fair view of the assets, liabilities, financial position and profit or loss of the issuer and the undertakings included in the consolidation taken as a whole and that the management report includes a fair review of the development and performance of the business and the position of the issuer and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

Biagio Murciano
Managing Director

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Independent auditor's report

To the sole Shareolder of
Telecom Italia Finance S.A.
12 rue Eugène Ruppert
L-2453 Luxembourg

Report on the audit of the consolidated financial statement

Opinion

We have audited the consolidated financial statements of Telecom Italia Finance S.A. and its subsidiaries (the "Group"), which comprise the consolidated statement of financial position as at 31 December 2022, and the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended 31 December 2022, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2022, and of its consolidated financial performance and consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRS") as adopted by the European Union.

Basis for opinion

We conducted our audit in accordance with EU Regulation N° 537/2014, the Law of 23 July 2016 on the audit profession ("Law of 23 July 2016") and with International Standards on Auditing ("ISAs") as adopted for Luxembourg by the "Commission de Surveillance du Secteur Financier" ("CSSF"). Our responsibilities under the EU Regulation Nº 537/2014, the Law of 23 July 2016 and ISAs as adopted for Luxembourg by the CSSF are further described in the "Responsibilities of the "réviseur d'entreprises agréé" for the audit of the consolidated financial statements" section of our report. We are also independent of the Group in accordance with the International Code of Ethics for Professional Accountants, including International Independence Standards, issued by the International Ethics Standards Board for Accountants ("IESBA Code") as adopted for Luxembourg by the CSSF together with the ethical requirements that are relevant to our audit of the consolidated financial statements, and have fulfilled our other ethical responsibilities under those ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of the audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Provision for tax contingencies

Risk identified

The Group has tax matters under discussion at various procedural levels, for which, based on its opinion and legal counsel, Euro 3,3 billion were disclosed by the Group as possible losses as disclosed in note 24.

The determination of the amount of the provision and the amounts disclosed depends on critical judgments made by management, based on the analysis of the proceedings and the corresponding prognosis for their final resolution by its legal advisors. The audit of management's assessment of the likelihood of loss in tax proceedings is complex, highly subjective and based on interpretations of tax legislation and court decisions, since there is significant uncertainty in the estimates as to the outcome of court decisions, how formerly adjudged cases have evolved and the position of the tax authorities. In addition, in view of the magnitude of the amounts involved, any changes in estimates or assumptions that impact the determination of the loss prognosis may have significant impacts on the Group's financial statements. Accordingly, this was considered as a key audit matter.

Our answer

Our audit procedures included, with the assistance of our tax experts, the following, among others:

(i) We requested and obtained confirmation from all internal and external legal advisors who are involved in the tax proceedings of the Group, confirming the amounts and prognosis of proceedings losses, as determined by the Group's management.

(ii) To test the Group's assessment of the likelihood of loss in tax proceedings, our audit procedures included, among others, the involvement of our internal Tax Controversy experts to support us in discussions regarding the forecasts made by Group's external lawyers for the most significant tax contingencies.

(iii) Additionally, for the most significant tax proceedings, we obtained additional legal opinions from other legal advisors to assess the reasonableness of the prognosis determined by the Group's legal advisors in charge of the respective proceedings, and we evaluated the arguments, case law and/or strategy of defense adopted by the Group's legal advisors.

Acquisition of Cozani RJ Infraestrutura e Rede de Telecomunicações S.A. ("SPE Cozani")

Risk identified

As of 20 April 2022, the Group acquired 100% of the shares of the Cozani RJ Infraestrutura e Rede de Telecomunicações S.A. ("SPE Cozani"), company in which part of the mobile telephone assets of Oi Movel S.A. had been transferred, for a purchased consideration of Euro 1,373 million.

The acquisition was accounted for as a business combination according to IFRS 3. Therefore, the Group estimated the fair value of assets acquired and liabilities assumed as well as estimated its contingent consideration using valuation models and assumptions about future business performance (including revenue growth rates and annual customer churn).

Auditing the Group's business combination accounting was complex and involved significant auditor judgment due to the significant estimation uncertainty related to the assumptions used by management in determining the fair value of assets acquired and liabilities assumed, mainly with reference to customer relationships. Management projections and underlying assumptions are forward looking and could be affected by future economic events and market conditions. Considering the complexity and materiality of the business combination, we considered this area as a key audit matter.

The disclosure regarding this transaction was provided in note 4 "Business Combinations".

Our answer

Our audit procedures in response to the key audit matter included, among others:

(i) We tested controls over management's evaluation of the purchase contract for terms and conditions that would impact the accounting and the identification, recognition and measurement of the intangible assets, including the controls over the determination of the significant assumptions used to develop estimates of fair value.
(ii) We tested controls over management' estimation of the contingent consideration.
(iii) With the support of our valuation specialists we tested the Management's assumptions regarding the best estimate of the contingent consideration and the fair value of identified intangible assets and property, plant and equipment.
(iv) We evaluated the adequacy of the disclosures provided by the group in the notes in relation to its acquisition.

Other information

The Board of Directors is responsible for the other information. The other information comprises the information included in the consolidated management report and the corporate governance statement but does not include the consolidated financial statements and our report of "réviseur d'entreprises agréé" thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report this fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors and of those charged with governance for the consolidated financial statements

The Board of Directors is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS as adopted by the European Union / Luxembourg legal and regulatory requirements relating to the preparation and presentation of the consolidated financial statement , and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

The Board of Director is also responsible for the preparation and fair presentation of the consolidated financial statements in compliance with the requirements set out in the Delegated Regulation 2019/815 on European Single Electronic Format, as amended (“ESEF Regulation”).

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group’s financial reporting process.

Responsibilities of the “réviseur d’entreprises agréé” for the audit of the consolidated financial statements

The objectives of our audit are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue a report of the “réviseur d’entreprises agréé” that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with EU Regulation N° 537/2014, the Law of 23 July 2016 and with the ISAs as adopted for Luxembourg by the CSSF will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with EU Regulation N° 537/2014, the Law of 23 July 2016 and with ISAs as adopted for Luxembourg by the CSSF, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group’s internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.

- Conclude on the appropriateness of Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our report of the "réviseur d'entreprises agréé" to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our report of the "réviseur d'entreprises agréé". However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Assess whether the consolidated financial statements have been prepared, in all material respects, in compliance with the requirements laid down in the ESEF Regulation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities and business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate to them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter.

Report on other legal and regulatory requirements

We have been appointed as "réviseur d'entreprises agréé" by the General Meeting of the Shareholders on 25 May 2019 and the duration of our uninterrupted engagement, including previous renewals and reappointments, is 4 years.

The consolidated management report is consistent with the consolidated financial statements and has been prepared in accordance with applicable legal requirements.

The corporate governance statement, included in the consolidated management report, is the responsibility of the Board of Directors. The information required by article 68ter paragraph (1) letters c) and d) of the law of 19 December 2002 on the commercial and companies register and on the accounting records and annual accounts of undertakings, as amended, is consistent with the consolidated financial statements and has been prepared in accordance with applicable legal requirements.

We have checked the compliance of the consolidated financial statements of the Group as at 31 December 2022 with relevant statutory requirements set out in the ESEF Regulation that are applicable to the financial statements. For the Group, it relates to:

- Financial statements prepared in valid xHTML format;
- The XBRL markup of the consolidated financial statements using the core taxonomy and the common rules on markups specified in the ESEF Regulation.

In our opinion, the consolidated financial statements of the Group as at 31 December 2022, identified as tel-2022-12-31-en.xhtml, have been prepared, in all material respects, in compliance with the requirements laid down in the ESEF Regulation.

We confirm that the audit opinion is consistent with the additional report to the audit committee or equivalent.

We confirm that the prohibited non-audit services referred to in EU Regulation No 537/2014 were not provided and that we remained independent of the Group in conducting the audit.

Ernst & Young
Société anonyme
Cabinet de révision agréé

Gabriel De Maigret

Luxembourg, 14 April 2023