



(This independent auditors' report has been translated into English solely for the convenience of international readers. Accordingly, only the original Italian version is authoritative.)

Rete Ferroviaria Italiana S.p.A.

**Financial statements as at and for the year ended
31 December 2022**

(with independent auditors' report thereon)

KPMG S.p.A.

28 March 2023



KPMG S.p.A.
Revisione e organizzazione contabile
Via Curtatone, 3
00185 ROMA RM
Telefono +39 06 80961.1
Email it-fmauditaly@kpmg.it
PEC kpmgspa@pec.kpmg.it

(This independent auditors' report has been translated into English solely for the convenience of international readers. Accordingly, only the original Italian version is authoritative.)

Independent auditors' report pursuant to article 14 of Legislative decree no. 39 of 27 January 2010

*To the sole shareholder of
Rete Ferroviaria Italiana S.p.A.*

Report on the audit of the financial statements

Opinion

We have audited the financial statements of Rete Ferroviaria Italiana S.p.A. (the "company"), which comprise the statement of financial position as at 31 December 2022, the income statement and the statements of comprehensive income, changes in equity and cash flows for the year then ended and notes thereto, which include a summary of the significant accounting policies.

In our opinion, the financial statements give a true and fair view of the financial position of Rete Ferroviaria Italiana S.p.A. as at 31 December 2022 and of its financial performance and cash flows for the year then ended in accordance with the International Financial Reporting Standards endorsed by the European Union.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISA Italia). Our responsibilities under those standards are further described in the "*Auditors' responsibilities for the audit of the financial statements*" section of our report. We are independent of the company in accordance with the ethics and independence rules and standards applicable in Italy to audits of financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter

We draw attention to that disclosed by the directors in note "39 – Events after the reporting date" and in the directors' report, paragraph "Litigation and disputes", in which they note that, with its ruling of 1 March 2023, the Rome Court handed down its judgement terminating the civil action commenced by Trenitalia S.p.A. against Rete Ferroviaria Italiana S.p.A. for the recovery of undue payments deriving from the failure to repay amounts under the K2 discount for the period from 1 December 2005 to 31 December 2007.



Rete Ferroviaria Italiana S.p.A.

Independent auditors' report

31 December 2022

The court ordered Rete Ferroviaria Italiana S.p.A. to pay approximately €144.5 million, plus interest and legal fees, to Trenitalia S.p.A. and roughly €91.3 million, plus interest and legal fees to Mercitalia Rail S.r.l.. It rejected Rete Ferroviaria Italiana S.p.A.'s hold harmless claim against the Ministry of Infrastructure and Transport and the Ministry of the Economy and Finance and ordered it to pay their legal fees as well.

Based on the opinion from their legal counsel, the directors have assessed the risk of losing the case as possible. Therefore, they did not make any provision therefor in the financial statements at 31 December 2022.

We did not qualify our opinion in this respect.

Management and coordination

As required by the law, the company disclosed the key figures from the latest financial statements of the company that manages and coordinates it in the notes to its own financial statements. Our opinion on the financial statements of Rete Ferroviaria Italiana S.p.A. does not extend to such data

Responsibilities of the company's directors and board of statutory auditors ("Collegio Sindacale") for the financial statements

The directors are responsible for the preparation of financial statements that give a true and fair view in accordance with the International Financial Reporting Standards endorsed by the European Union and, within the terms established by the Italian law, for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

The directors are responsible for assessing the company's ability to continue as a going concern and for the appropriate use of the going concern basis in the preparation of the financial statements and for the adequacy of the related disclosures. The use of this basis of accounting is appropriate unless the directors believe that the conditions for liquidating the company or ceasing operations exist, or have no realistic alternative but to do so.

The *Collegio Sindacale* is responsible for overseeing, within the terms established by the Italian law, the company's financial reporting process.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISA Italia 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 financial statements.

As part of an audit in accordance with ISA Italia, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the 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;



Rete Ferroviaria Italiana S.p.A.

Independent auditors' report

31 December 2022

- 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 company's internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the director;
- conclude on the appropriateness of the 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 company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the 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 auditors' report. However, future events or conditions may cause the company to cease to continue as a going concern;
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance, identified at the appropriate level required by ISA Italia, 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.

Report on other legal and regulatory requirements

Opinion pursuant to article 14.2.e) of Legislative decree no. 39/10

The company's directors are responsible for the preparation of a directors' report at 31 December 2022 and for the consistency of such report with the related financial statements and its compliance with the applicable law.

We have performed the procedures required by Standard on Auditing (SA Italia) 720B in order to express an opinion on the consistency of the directors' report with the company's financial statements at 31 December 2022 and its compliance with the applicable law and to state whether we have identified material misstatements.

In our opinion, the directors' report is consistent with the company's financial statements at 31 December 2022 and has been prepared in compliance with the applicable law.

With reference to the above statement required by article 14.2.e) of Legislative decree no. 39/10, based on our knowledge and understanding of the entity and its environment obtained through our audit, we have nothing to report.

Rome, 28 March 2023

KPMG S.p.A.

(signed on the original)

Gabriele de Gennaro
Director of Audit

(Translation from the Italian original which remains the definitive version)

Rete Ferroviaria Italiana S.p.A.

2022 ANNUAL REPORT

RETE FERROVIARIA ITALIANA - S.p.A. - Ferrovie dello Stato Italiane group

Single-member company, managed and coordinated by Ferrovie dello Stato Italiane S.p.A. pursuant to article 2497-*sexies* of the Italian Civil Code and Legislative decree no. 112/2015

Fully paid-up share capital: €31,528,425,067.00

Registered office: Piazza della Croce Rossa 1, 00161 Roma

Tax code and company registration number: 01585570581 - Roma company register

R.E.A. number: 758300

VAT number: 01008081000

Web address: <https://www.rfi.it/>

MISSION

Rete Ferroviaria Italiana S.p.A. ("RFI") is the company within the Ferrovie dello Stato Italiane group ("FS Italiane group") responsible for managing the national railway infrastructure. With decree no. 138 - T of 31 October 2000, the Ministry of Transport and Navigation assigned the company a 60-year concession to operate the Italian railway infrastructure.

RFI owns the infrastructure consisting of the portion that belonged to the former public body, Ferrovie dello Stato (and made up the body's assets) and the portion acquired subsequently using own funds (obtained through third-party financing and capital injections, first from the government and subsequently Ferrovie dello Stato Italiane) and, currently, through government grants related to assets.

To pursue its mission, RFI carries out the following main activities:

- designing, building, operating, managing and maintaining the Italian railway infrastructure pursuant to Legislative decree no. 112 of 2015, including passenger transport stations, modal and intermodal freight plant and the management of control and safety systems related to train operation, including HS/HC trains;
- promoting the integration of railway infrastructures and cooperation with other railway infrastructure operators;
- all other duties assigned to RFI as the infrastructure operator pursuant to current legislation, such as: access to the infrastructure and services, collecting the fee for the use of the infrastructure from railway companies, and any other activities necessary or useful to pursuing the institutional purposes assigned by the competent national and EU authorities;
- operating the railway connection by sea between Sicilia and the peninsula, including by using "high-speed ships";
- designing, building, operating, managing and maintaining the regional railway infrastructure pursuant to Legislative decree no. 422 of 19 November 1997, as subsequently amended, including the goods, areas and assets strictly essential and related to the infrastructure's operation, in accordance with the provisions of article 47.4/11-bis of Decree law no. 50/2017.

The Operator's responsibilities mainly consist of the following duties:

- ensuring that the railway lines and infrastructures are 100% usable and efficient at all times;
- managing investments to strengthen, technologically update and develop railway lines and plant;
- building the railway connection by sea between the peninsula and Sicilia and Sardegna, operating the railway connections to Sicilia using high-speed ships;
- monitoring the health of employees, workspaces, services and public areas;
- coordinating research on materials, products and the environment;
- designing, building, managing and maintaining regional railway infrastructure in accordance with Decree law no. 50/2017;
- promoting the integration of railway infrastructure and cooperation with other infrastructure operators, particularly throughout the European Union.

On 26 May 2022, RFI's shareholders approved an amendment to its bylaws in their extraordinary meeting, based on the "new governance model" adopted by the FS Italiane group with Group measure no. 304/AD of 18 May 2022 and subsequently adopted by RFI with Communication no. 32/AD of 30 May 2022. This amendment extended the company's business object to include the possible management and technical, organisational and operating coordination, as division head, of (i) companies that perform activities falling under RFI's business object and (ii) companies that design and build transport systems and infrastructure or operate road and motorway networks, without prejudice to their independent decision-making and management powers.

Integrating the various infrastructures and modes of transport for greater sustainability and to the company's benefit, the group's new governance model redefines the group's governance structure based on four divisions (Infrastructure, Passenger Transport, Logistics and Urban) in order to seize the potential of the various group companies.

This model helps create a single, cohesive strategy for a group with operations in a number of different, yet complementary, sectors while ensuring the autonomy of each sector and of the subsidiaries' operations.

Consequently, under this model, management and coordination are carried out:

- by FS Italiane S.p.A. on the division heads and other subsidiaries to provide general strategic guidance and to define and coordinate the implementation and financing of the group's business model;
- by each division head on the companies in its division to provide them with guidance, coordination and technical-operational oversight, including risk management models, systems and protocols.

As head of the Infrastructure division, and therefore, on behalf of its subsidiaries, Anas S.p.A. and its subsidiaries, Italferr S.p.A. and its subsidiaries, Ferrovie Sud Est e Servizi Automobilistici S.r.l. (solely for the "railway infrastructure" area), RFI carries out the management and coordination activities described in the group regulation and the Infrastructure division regulation adopted by RFI's board of directors on 17 May 2022, effective from 1 June 2022.

RFI signed the management and coordination contract pursuant to article 2497-septies of the Italian Civil Code on 10 June 2022. This contract is effective for its subsidiaries and the other companies in its division. It covers the scope of the management and coordination activities set out in the attached division regulation, which is an integral and substantive part thereof.

In compliance with the terms of contract, the subsidiaries of Anas S.p.A. and Italferr S.p.A. (respectively on June 8 and 6 July 2022) agreed to the management and coordination contract, pursuant to article 1332 of the Italian Civil Code.

COMPANY OFFICERS AND INDEPENDENT AUDITORS**Board of directors:**

Chairwoman Anna Masutti

CEO Vera Fiorani

Directors Enrico Corali

Silvio Martuccelli

Giuseppe Antonio Taini

Board of statutory auditors:

Chairman Mauro D'Amico

Standing statutory auditors Silvia Razzolini

Lorenzo Stanghellini

Alternate statutory auditors Ennio Celio Luglio

Monica Petrella

Manager in charge of the company's accounting documents preparation:

Andrea Pascucci

Independent auditors:

KPMG S.p.A.
(engagement: 2020, 2021 and 2022)

CONTENTS

CHAIRWOMAN'S LETTER	7
Directors' report.....	9
Key and glossary	10
Financial highlights	14
Our company.....	15
2022-2031 business plan	17
Legislative And Regulatory Framework.....	19
Transactions with the government.....	23
Customer relations.....	26
Main events of the year	34
Human resources.....	37
Sustainability and the environment.....	38
Macroeconomic context.....	42
Financial position and performance.....	44
Investments	50
Network development	50
Integrated technologies.....	55
Infrastructure	58
Stations	58
Railway operating safety.....	59
Research and development.....	63
Performance of subsidiaries	66
Treasury shares.....	69
Litigation and disputes	69
Remuneration of directors that have been assigned powers.....	82
Disclosures required by article 2497-ter	82
Risk factors	83
Outlook.....	88
Financial statements.....	92
Income statement.....	93
Statement of comprehensive income	94
Statement of financial position	95
Statement of changes in equity	96
Statement of cash flows	97
Notes to the financial statements	98
Notes to the income statement	121
Statement of financial position	130
Other information	169
Events after the reporting date	179
Allocation of profit for the year	181

CHAIRWOMAN'S LETTER

Rete Ferroviaria Italiana S.p.A. (RFI) made a profit of €263 million for 2022.

While this is a slight reduction on the previous year, it is an extremely positive achievement given the very unstable macroeconomic context caused by the steady deterioration of the global geopolitical situation.

The company's gross operating profit improved by €69 million (15%) on the previous year, boosted by the recovery in traffic volumes and demand for traffic-related services which offset the progressive increase in the cost of raw materials and, in particular, electricity.

In addition, the new 2022-2026 Government Programme Contract - Services (GPC-S) allocated additional grants of €90 million to RFI, and non-current assets grew by €41 million on 2021 as a result of the company's intense investing.

The progress of investments, equal to €5,930 million, grew again with an increase of €339 million (roughly 6%) on the previous year, which had already seen the highest annual amount of the past decade. Investments of around €3,369 million were allocated to large-scale infrastructure projects and roughly €2,561 million to maintain the efficiency of infrastructure and for work throughout Italy (including €282 million for technology-related projects).

The railway sector is a key player in the move to make the transport sector more connected, digital and sustainable. In this context, RFI has been called upon to play a key role in defining and implementing the National Recovery and Resilience Plan (NRRP), specifically with respect to the investments provided for in Mission 3 "Infrastructure for a sustainable mobility", 80% of which will go to projects to develop and strengthen the national and regional railway network, including €23.86 billion for RFI investments.

The current phase is strategic for Italy's green transition and its social, environmental and economic sustainability bolstered by the above-mentioned NRRP, which outlines the objectives, reforms and investments that Italy intends to make using the European funds under Next Generation EU to alleviate the economic and social impact of the pandemic and make Italy a more equitable, greener and more inclusive country with a more competitive, dynamic and innovative economy.

There are three far-reaching investment projects for railway infrastructure: modernising the over 2,200 stations in Italy; its extension to southern Italy and the upgrading of the HS/HC network throughout the country; strengthening and improving the last mile connections to ports and airports to facilitate integration among the country's different areas and intermodal transport.

Within the framework of commitments for the Green Deal, Next Generation EU and the NRRP, with the involvement of all senior managers, in 2022, the company continued the change management project named "RFI sustainability on the go", launched the previous year, to speed up the integration and development of best practices for sustainability in investments and, in general, in all business processes, to maximise RFI's contribution to the FS Italiane group's long-term targets and the UN Sustainable Development Goals (SDGs).

Specifically, it has planned over 40 ESG focus areas and some of its initial 2022 outputs included the ESG KPI Catalogue, six updated sections of the Design Manual and three updated sections of the General Technical Specifications for Civil Works Contracts. In June 2022, the "RFI sustainability on the go" project obtained international recognition from UIC (Union Internationale des Chemins de fer) as the best practice of excellence with respect to the sustainable transformation of railways while the "StationLand" project, the station location

intelligence platform, born from the importance of the relationship between stations and their local urban environment, received the “Best multimodal partnership” award.

In addition to the “RFI sustainability on the go” project, the company continued to provide additional training courses on its corporate governance projects. They explored specific topics of interest to RFI on the main governance aspects of joint-stock companies to teach an understanding of key topics and ensure that the managers operating in a company as technically specialised as RFI receive continuous training for their respective roles.

Again in order to provide managers with a comprehensive understanding of matters that are particularly important to it, the company provided the “Course on the New Public Procurement Code” to ensure they have an appropriate technical and specific understanding of certain key topics and aspects of primary importance relating to tenders, which constitute one of the fundamental cornerstones of the country’s investments and economic development policy and in which RFI is a key contracting body at national level.

Similarly, the meeting series on the “future challenges of a changing world” held to share ideas and knowledge about technology, the economy, law and the applied sciences is an opportunity for managers to understand and improve their ability to take decisions and act. RFI operates in a highly complex context and the purpose of these meetings is to respond to the need to address the most significant problems through a more complete representation of them, from the technological, to the economic legal and behavioural science issues aimed at identifying a common approach that supports the company’s managers in their daily work.

With respect to environmental sustainability, according to the ENVISION protocol, the Company has kickstarted the certification process of the first project for one of its stations based on the guidelines validated by ICMQ (the certification body for construction products and services), which RFI used to adapt the international protocol for the sustainability certification of Italian-built works. RFI intends to systematically apply the most advanced international standards to the design/assessment of the energy, environmental and social performances of the works carried out at stations to minimise the consumption of natural resources and emissions during their lifecycle and to introduce solutions based on circularity and creating the maximum value for the local area.

Last but not least, in 2022, the company also continued training to cultivate a safety culture, focused on consolidating a consistent, shared approach throughout the company for the management of safety issues and to spread RFI personnel’s best practices in workplaces.

The pilot phase of the new “SAFE TOGETHER” project was completed. It consisted of trialling a safety agreement with the company’s contractors to inform all workers about safety rules at every stage of construction in work sites.

One of the project’s key features is “Sicurpass”, a points system to ensure and acknowledge the subcontractor’s and its workers’ awareness of the main work site safety rules and their compliance with occupational health and safety regulations.

The Chairwoman

DIRECTORS' REPORT

KEY AND GLOSSARY

Below is a description of the criteria used to calculate the most frequently used performance indicators for the purposes of this report. Such criteria differ from the criteria applied to the financial statements and which management finds useful in monitoring the company's performance and believes reflect the results of operations and financial trends of its business segments:

- **Gross operating profit:** this is an indicator of the performance of operations and reflects the core business only. It is calculated as the difference between revenue and operating costs.
- **Operating profit:** this is an indicator of the performance of operations and is calculated as the sum of gross operating profit and amortisation and depreciation, impairment losses (impairment gains) and provisions.
- **Net operating working capital:** this is the sum of inventories, contract assets, current and non-current trade receivables, current and non-current trade payables and advances to suppliers.
- **Other assets, net:** these reflect the sum of assets and advances from the Ministry of the Economy and Finance (MEF) for grants, deferred tax assets, other current and non-current assets and other current and non-current liabilities.
- **Working capital:** this is the sum of net operating working capital and other assets, net.
- **Net non-current assets:** these reflect the sum of property, plant and equipment, investment property, intangible assets and equity investments.
- **Net assets held for sale:** these consist of assets whose carrying amount will be recovered principally through a sale transaction rather than through continuing use.
- **Net invested capital (NIC):** this is the sum of working capital, net non-current assets, other provisions and net assets held for sale.
- **Net financial debt (NFD):** this financial indicator consists of bonds, non-current bank loans and borrowings, the current portion of non-current bank loans and borrowings, current and non-current loans and borrowings from other financial backers, cash and cash equivalents and current and non-current financial assets.
- **Equity (E):** this is a financial statements indicator calculated as the sum of share capital, reserves, retained earnings (losses carried forward), current and non-current derivative liabilities and the profit (loss) for the year.
- **Gross operating profit margin:** this profitability indicator is calculated as the ratio of gross operating profit to operating revenue.
- **Operating profit margin - ROS (return on sales):** this sales profitability indicator is calculated as the ratio of operating profit to revenue.
- **Debt/equity ratio:** this indicator is used to measure the company's debt. It is calculated as the ratio between net financial debt and equity.

- **ROE (return on equity):** this is a profitability indicator for equity and is calculated as the ratio of profit/loss for the year and average equity (from the start to the end of year), net of the profit/loss for the year.
- **ROI (return on investment):** this is a profitability indicator for invested capital through core business operations. It is calculated as the ratio of operating profit to average NIC (from the start to the end of the year).
- **Turnover of net invested capital:** this is an efficiency indicator that expresses invested capital's ability to transform into sales revenue. It is calculated as the ratio between operating revenue and average NIC (from the start to the end of the year).

The following terms are frequently used in relation to the company's operations:

- **Multistation Computerised interlocking system:** this is a central management system for control and signalling and station safety.
- **Transport Regulator (ART):** the body in charge of regulating transport and access to related infrastructure along with accessory services.
- **ATC:** Automatic train control. This system automatically controls the train's speed. It is the technological and functional evolution of the automatic train protection (ATP) system.
- **HS/HC:** High speed/High capacity. This is the system of lines and vehicles specifically developed for high speed and/or high capacity transport.
- **CSEA:** the fund for energy and waste collection service.
- **CIPESS:** Interministerial committee for economic planning and sustainable development.
- **Government Programme Contract - Services or Investments:** these are long-term contracts between the MIT and RFI defining investment projects and other terms and conditions, such as ordinary and/or extraordinary network maintenance, to encourage the development of the railway system.
- **Main line:** this is a particularly important series of railway lines in terms of traffic volumes and the transport role that it plays, as it joins major network centres or hubs.
- **Prime Ministerial decree:** Prime Minister's decree.
- **European Railway Agency (ERA):** this is the EU agency establishing the mandatory requirements for European railways and builders in the form of technical interoperability specifications applicable to the European railway system. The ERA sets common safety targets, along with the related methods and common safety indicators, in compliance with Directive 2004/49/EC, as amended.
- **European Rail Traffic Management System (ERTMS):** this is the system that integrates the various railway networks in the EU from a functional and operational standpoint and provides for the European Train Control System.

-
- **Environmental, Social, Governance (ESG):** these activities related to responsible investment (IR) which pursue the typical objectives of financial management taking aspects of an environmental, social and governance nature into consideration.
 - **European Train Control System (ETCS):** this is the overall network of the various national automatic train control (ATC) systems. ATC systems consist of traditional and innovative signalling systems.
 - **Infrastructure Operator:** Operator of the domestic infrastructure.
 - **Global System for Mobile Communication - Railway (GSM-R):** this is the European standard for public digital mobile telephony system with a transmission speed of 9.6 Kbps.
 - **ICT:** Information and communication technology.
 - **NRI:** National railway infrastructure.
 - **MATTM:** Ministry of the Environment and Protection of Land and Sea.
 - **MEF:** Ministry of the Economy and Finance.
 - **MIT:** Ministry of Infrastructure and Transport.
 - **Hub:** this is a conventional term to define a railway area that generally coincides with major metropolitan destinations presenting highly dense and relatively complex medium to large-size stations and other railway plants that are interconnected by various lines, creating a continuation of the main routes into the same hub and other lines, built to manage various traffic flows and alternative routes, or service loops.
 - **APG:** Assirevi's preliminary guidance on the IFRS.
 - **PIR:** Network Statement, containing the criteria, procedures, methods and terms for the allocation of the infrastructure capacity and for the provision of the related services, as well as a detailed presentation of the available infrastructure and access conditions.
 - **LC:** level crossing.
 - **Operating control line:** a location where there is no passenger service.
 - **MAP:** minimum access package.
 - **PRG:** general zoning plan.
 - **PUMS:** urban sustainable mobility plan
 - **Doubling:** this is the transformation of a single track to a double track.
 - **Terminal:** this is the intermodal transport infrastructure for the transfer of large load units between carriers, with or without warehouses of modest size.
 - **TLC:** telecommunications.
 - **CCS/CTC:** this command and control system/large network central traffic control system regulates traffic on the main lines and hubs, outperforming traditional centralised traffic control systems.

-
- **TSCS:** train speed control system. This is the first functional stage of the ATC system for constant control over train speed, making it possible to activate the emergency brakes if the train exceeds the maximum speed allowed on the line or if it proceeds past stop signals.
 - **Steering support controls - SSC:** they are used to control and manage railway operation on the line from the central control stations in Bologna and Verona.
 - **Intermodal transport:** this is transport using two or more modes of transport (road, rail, sea or river) with the transfer of load units from one mode to another without breaking up the load, i.e., using a roadway vehicle or intermodal transport unit (containers, swap bodies and semitrailers).
 - **Train-km (tkm):** this is the number of train events per kilometre travelled.

FINANCIAL HIGHLIGHTS

		2022	2021
ROE	P/E*	0.78%	0.82%
ROI	OP/ANIC	0.88%	0.76%
ROS (OP MARGIN)	OP/R	9.64%	8.91%
GOP/R (GOP MARGIN)	GOP/R	16.10%	14.80%
NET ASSET TURNOVER (NAT)	R/ANIC	0.09	0.09
DEBT/EQUITY RATIO	NFD/E	0.02	0.05

KEY

ANIC: Average net invested capital (average of the opening and closing balances)

OP: Operating profit (loss)

GOP: Gross operating profit (loss)

E*: Average equity (average of the opening and closing balances) net of the profit for the year

E: Equity

NFD: Net financial debt

R: Revenue

P: Profit for the year

OUR COMPANY

Rete Ferroviaria Italiana S.p.A. (the “company” or “RFI”) carries out its operations and provides its services in compliance with the “principles governing the provision of public services” and the values shared by the entire FS Italiane group.

The main areas of operations carried out by RFI within the scope of the Concession Act and on the basis of the specific sector regulations are:

- the safe management of railway traffic, including via the train speed control and command systems;
- maintaining the efficiency of the national railway infrastructure so that it can be fully used by the transport companies, via routine and non-routine maintenance. Since 2014, together with safety, security and the railway ferry to Sicilia and Sardegna, this has been governed by the Government Programme Contract - Services between RFI (as national railway infrastructure operator) and the government;
- the planning and implementation of investments to upgrade the existing infrastructure and its technological equipment, as well as for the development and construction - including via investees - of new railway lines and plants as agreed with the government in the Government Programme Contract - Investments;
- the annual drafting of the railway schedule based on the requests put forward by the passenger and freight railway companies in line with the regulations of the Network Statement (“PIR”), the official document through which the national railway infrastructure operator notifies its direct customers of the criteria, procedures, methods and timing for the allocation of the infrastructure capacity and for the provision of the related services;
- ascertaining the mental and physical suitability of personnel - both its own and of the railway companies and other transport sector operators - involved in activities related to the safety of train traffic and railway management, as well as the safety of waterway and land public transport;
- the accessibility of stations and of the station services offered to passengers and, in general, all users in line with the principles and values that guide RFI in its dealing with customers and the public;
- providing assistance at stations to passengers with reduced mobility (PRM) as station manager, a role that the company took on in December 2010 to implement Regulation (EC) no. 1371/2007 on “Rail passengers’ rights and obligations”;
- the accessibility of the freight terminals it owns, including through the integrated offer of access to the infrastructure and the last railway mile services provided via the subsidiary Terminali Italia S.p.A., with a network of 16 terminals throughout Italy;
- the sea link ensuring the continuity of railway services to Sicilia by ferrying passenger and freight trains between Villa San Giovanni and Messina, and to Sardegna carried out exclusively at the request of the railway companies for freight trains or transport services;
- integrating the Italian network with the trans-European transport networks in line with the plans and standards defined at supra-national level and as per the programmes carried out in conjunction with foreign infrastructure operators, including as part of the European Economic Interest Grouping (EEIG) and International associations for network interoperability and the development of freight corridors.

RFI figures at 31 December 2022 are shown in the table below:

THE COMPANY	
Number of employees	29,073
Share capital	€31,528,425,067
Deputy general managers	2
Local infrastructure operating divisions	15
National workshops	5
Area train traffic structures	11
Local commercial structures	6
Local investment units	5
Local stations	6
Local health units	10
OPERATING RAILWAY LINES ⁽¹⁾ 16,829 km	
CLASSIFICATION	
Main lines	6,464 km
Complementary lines	9,415 km
Hub lines	950 km
TYPE	
Double-track lines	7,731 km
Single-track lines	9,098 km
POWER	
Electrical lines	12,184 km
- <i>double track</i>	7,654 km
- <i>single track</i>	4,530 km
Diesel fuel lines	4,645 km
TOTAL TRACK LENGTH 24,560 km	
Traditional line	23,093 km
HS line (2)	1,467 km
RAILWAY PLANT	
Stations that can serve passengers	~2,200
Ferry facilities	4
Freight plant ⁽³⁾	199
INNOVATIVE REMOTE CONTROL AND TRAIN SPEED PROTECTION TECHNOLOGIES ⁽⁴⁾	
Remote control systems for traffic	13,565 km
TSCS, for train speed control	13,324 km (of which: 57 km equipped with both SSC and TSCS)
SSC for steering support	2,539 km (of which: 57 km equipped with both SSC and TSCS)
ERTMS, for interoperability	878 km
GSM-R, for mobile communications	11,700 Km

Note

- (1) 70 km of which on the foreign network
(2) referring to sections equipped with ERTMS powered at 25kV and their connections to other service locations
(3) facilities with intermodal centres, hubs, connections, etc.
(4) all network lines are equipped with one or more train speed protection systems
(5) lines solely equipped with ERTMS-ETCS level 2

2022-2031 BUSINESS PLAN

On 8 March 2022, the Company's Board of Directors approved the 2022-2031 Business Plan as part of the group's more extensive ten-year plan, designed to strengthen its leadership position in the domestic transport infrastructure, passenger mobility and logistics sectors.

With respect to railway infrastructure in particular, the Group's Vision is explained in RFI's plan with a series of strategic propositions, hinged on the strategic concept of the network as a physical and social connection system for people, places and goods and its evolution towards:

- ✓ a more integrated, accessible, high-performance and rapid passenger transport network, to be achieved by enhancing the role played by stations, strengthening integration with other passenger transport modes, building up HS connections and services and improving the quality and frequency of regional services, especially in large urban areas;
- ✓ a higher performance, competitive and integrated freight network, improving the quality and efficiency of national and international freight transport infrastructure and services by upgrading their output and optimising their operation, and promoting modal integration of the first and last mile through connections with the main freight hubs;
- ✓ a safe, more robust and resilient network, with projects to increase traffic safety standards and, more generally, railway safety, to improve infrastructure resilience, especially with respect to climate change, and to ensure high levels of reliability, availability, regularity and punctuality to the railway companies and end customers;
- ✓ a greener, more community, people & customer oriented network, to contribute to a more sustainable transport system, reduce consumption of non-renewable resources, adopt practices and solutions based on the circular economy and carbon neutrality with the suppliers' involvement and strengthen ongoing, transparent engagement with the Central Institutions, Local Bodies, the railway companies, passengers, the general public and other external and internal stakeholders to grow the network's shared value and contribute to improving the quality of life and social and economic well-being of people and the community;
- ✓ a more advanced, digital and technological network to accelerate the introduction of cutting-edge technologies for a smart, digital network and to fast-track greater process automation.

The Business Plan also includes projects to enhance the company's assets, grow its business and develop new transport systems, focusing on the study and development of new long-haul and/or urban mobility systems to be integrated with or that are complementary to the railway system.

The main challenges envisaged in the Plan are the implementation of the NPPR's investment programme in line with the established milestones, for the best deployment of the massive resources earmarked to resolve Italy's infrastructure gaps, raise the service standards, make its network more accessible and introduce new technologies. The reforms to accelerate the approval process for Government Programme Contracts and authorisation of Large Works will make a considerable difference to the speed of spending.

In accordance with the action plans defined in the MIT's strategic document and the NPPR, the key projects driving RFI's 2022-2031 business plan are:

-
- ✓ the project to extend and upgrade the High Speed (HS) network to improve integration and accessibility in Italy's main urban areas by building different infrastructure to meet each area's requirements and implementing solutions to speed up and resolve saturation problems in addition to laying new lines in order to maximise HS north/south and east-west connections;
 - ✓ the project to extend the ERTMS system to the entire network (completion is slated for 2036) to ensure interoperability, safety and efficient circulation;
 - ✓ the project to increase the infrastructure's resilience to climate change, i.e., make it more resilient and safer to prevent potential climate risks (e.g., hydrogeological instability, adverse weather events);
 - ✓ the project to cultivate the role of stations as central to the new mobility paradigms, acting as both intermodal hubs and service hubs for the sustainable development of local areas and their mobility systems.

The company must develop its business in accordance with the most advanced environmental and social sustainability methods and criteria and in line with its stakeholders' requirements and expectations to maximise the environmental and social impact of its investments in a context where sustainability is central to the Group's Vision in order to create value for the mobility system and the country over the long term. To achieve this and accelerate the ESG evolution (Environmental, Social, Governance) of all the industrial processes connected to management of the national railway infrastructure, RFI's sustainability committee has drawn up a strategic action map for its ESG transition hinging on ten strategic action lines covering all the network management macro processes (development, operation, maintenance, divestment/reuse).

During 2022, the company developed important sustainability projects that are described in the "Sustainability and the environment" section.

LEGISLATIVE AND REGULATORY FRAMEWORK

National Recovery and Resilience Plan

The European Union's Next Generation EU is both part of its Multiannual Financial Framework 2021-2027 and a non-recurring exceptional financial instrument designed to boost the member states' economies, thanks to its vast resources. Each member State has detailed how it plans to use the resources in the National Recovery and Resilience Plans that they have prepared and approved in accordance with the guidelines set out in Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 (the "Regulation") and they have approved and sent their plans to the EU.

Italy's Plan has budgeted €222.14 billion to be allocated to six missions corresponding with the thematic structural areas on which the plan focuses:

1. digitalisation, innovation, competitiveness and culture;
2. green revolution and ecological transition;
3. infrastructure for sustainability mobility;
4. education and research;
5. inclusion and cohesion;
6. health.

Specifically, €31.46 billion has been allocated for Mission 3 "Infrastructure for a sustainable mobility" as follows: €27.97 billion for the high-speed (HS) rail and Road Safety 4.0 and €3.49 billion for intermodality and integrated logistics.

RFI's role in the success of the plan is of primary importance, particularly for Mission 3, for which the company has been allocated a total of €23.86 billion, equal to 11% of the entire Italian NRRP funds. Of this amount, €12.66 billion are additional resources for RFI that have been allocated to projects outside the portfolio and €11.2 billion have been allocated to "projects in progress" that have already been financed, therefore, freeing up financial resources which can instead be returned to Italy.

Moreover, RFI has been allocated approximately €95.7 million for component 3 of Mission 5 (M5C3) "Special projects for regional cohesion". These funds are to be used for infrastructure projects for the development of the Special Economic Zones in 2021-2026, with €57 million already formalised in contracts and the remainder yet to be formalised in contracts.

In addition to the measures issued in 2021, the following were added in 2022:

On 10 February, circular no. 9 National Recovery and Resilience Plan - Communication of technical instructions to prepare the Management and Control Systems of the central administrations that receive funds under the Plan and the related annex setting out the "technical instructions for the preparation of management and control systems" that defined the guidelines that RFI, as the central administration recipient of funds, adopted in February 2022 for the management and control system.

The circular specifies technical and operating aspects, including:

- the coordination, monitoring, control and reporting units of the central administrations that receive funds under the NRRP;

- the procedures to report and forward payment requests to the NRRP Central Service to be used by the recipients;
- how the funds will be disbursed;
- how the ReGis information system, which is the shared application tool supporting the planning, implementation, monitoring, reporting and control processes for the NRRP, will be used;

On 30 April 2022, **Decree law no. 36/2022** on “Additional urgent measures for the implementation of the NRRP” was published in the Official Journal general series no. 100. This decree law covered the following aspects:

- the use of NRRP investment economies: without prejudice to the regulations covering the use of project economies and resources available to offset the cost of surging prices of the material necessary to carry out the works, the administration recipients may allocate resources earmarked for the missions and provided for by the NRRP not already allocated during the selection of the “Primary Projects” (projects of particular strategic importance for each region and Autonomous Province);
- the implementing procedures and timeline for works funded by the NRRP: the provisions established by article 48 of Decree law no. 77/2021 on “Simplifying the assignment of public contracts under the NRRP and the Supplementary National Plan” are also to be applied to public investments split into functional lots;
- instructions for the Special Economic Zones and the Streamlined Logistics Zones: in order to strengthen the productive structure of the Special Economic Zones using the “Development Contract” tool, the government earmarked €250 million from the 2021-2027 Development and Cohesion Fund. These resources were assigned by CIPESS to the Ministry of Economic Development;

Law no. 79/2022 was subsequently published in the Official Journal general series no. 150 of 29 June 2022 converting Decree law no. 36 of 30 April 2022 into law and setting out additional urgent measures to implement the NRRP. It confirmed the general measures set out above.

Decree law no. 4 of 27 January 2022

On 27 January 2022, Decree law no. 4 was published in the Italian Official Journal general series no. 21 containing *Emergency measures to support companies and economic, labour and healthcare operators and local services in connection with the Covid-19 emergency and to contain the effects of price increases in the electrical sector* (Decree law no. 4/2022). Article 25 *Emergency measures for the railway sector* contains provisions concerning the infrastructure operator; specifically, paragraph 1 provides for the allocation of €10 million to RFI for each of the years from 2022 to 2034. During the period from 1 January 2022 to 31 March 2022, RFI, within the maximum amount of the allocation, shall reduce the fee for use of the railway infrastructure up to 100 percent of the amount exceeding the coverage of the cost directly related to the railway service as per article 17.4 of Legislative decree no. 112 of 15 July 2015 for railway passenger not under the public service obligation and freight transport. Any residual resources covered by paragraph 1 shall be used to compensate the infrastructure operator for the loss of revenue from the railway infrastructure charge over the same period.

Decree law no. 50/2022

On 17 May 2022, Decree law no. 50/2022 was published in the Italian Official Journal no. 114 containing “Emergency measures for national energy policies, company productivity and investment promotion, as well as social policies and the Ukraine crisis”. Article 26 “Emergency provisions for public contracts” sets out measures to

subsidise the exceptional hikes in prices of construction materials, fuel and energy products in the public procurement sector (excluding service and supply contracts) and to ensure that the projects wholly or partly funded under the NRRP and the Supplementary National Plan are achieved.

With respect to RFI, paragraph 12 of the above article 26 provides for a price adjustment mechanism for both public procurement contracts and framework agreements as per article 54 of Legislative decree no. 50/2016, as subsequently amended, of the FS Italiane group companies and Anas S.p.A.. This mechanism was introduced both for ongoing calls for tenders and the new calls to be published after enactment of the Decree law. In addition, article 56, which sets out new "Provisions for the Development and Cohesion Fund", provided that projects carried out as part of the NRRP, Institutional Development Contracts or which are being performed under the management of extraordinary commissioners do not have to comply with the timelines established by CIPESS for legally binding commitments. It also established that the timelines for outstanding work to be performed would be revised in light of the projects' total costs.

Decree law no. 115/2022

On 9 August 2022, Decree law no. 155 was published in the Italian Official Journal no. 185 setting out emergency measures covering energy, the drought emergency, and social and industrial policies.

Article 9.6 (emergency transport provisions) authorised the allocation of €15 million for 2022 to RFI to counter the adverse effects on the railway freight transport sector of the exceptional surge in energy prices. RFI offset this subsidy against the total net costs of the minimum access package services in order to reduce the fee for the use of railway infrastructure by up to 50% of the portion exceeding the covering of the cost directly incurred to provide the railway service as per article 17.4 of Decree law no. 112/2015 (railway freight transport) during the period from 1 April to 31 December 2022 within the maximum ceiling of the subsidy as per point 1. The fee for the use of infrastructure, to which the reduction as per point 2 applies, was calculated using the measures defined by the ART in article 37 of Decree law no. 201/2011.

Decree law no. 115/2022 was converted with amendments into Law no. 142 of 21 September 2022.

2023 Budget Act

Law no. 197 of 29 December 2022 was published in the Italian Official Journal General Series no. 303 of the same date setting out the government budget for the 2023 fiscal year and the three-year budget for 2023-2025 (the 2023 Budget Act). It included measures of interest to RFI.

Specifically, article 1.498-502 (Olympic and Paralympic Winter Games - Milano Cortina 2026) includes amendments to the current regulations to ensure completion of the plan for the works to be performed for the Olympic and Paralympic Winter Games to be held in Milano and Cortina in 2026. It authorises expenditure of €400 million, including €120 million for 2024, €140 million for 2025 and €140 million for 2026 to finance the remaining requirements of the plan for the entire works as per the Prime Minister's decree of 26 September 2022.

Paragraphs 507-208 of the same article (Financing of national access sections to the Torino-Lione base tunnel) authorises the spending of €50 million for 2024, €100 million for 2025 and €150 million for each year from 2026 to 2029 in order for Italy to access the EU funds to finance the railway works for the Italian access sections to the Torino-Lione base tunnel:

-
- "Torino rail bypass and connection to the Torino-Lione line - urgent works";
 - "Modification of the Bussoleno-Avigliano section of the historic Torino-Modane line".

Article 1.517 authorises the expenditure of €22 million for 2023 by RFI to design the Chiasso-Monza line as part of the Rhine-Alpine Corridor while subsequent paragraph 518 authorises €15 million for 2023, again for RFI, for the joint project to develop Piemonte as part of Terzo Valico dei Giovi – Nodo di Genova project in order to cover the greater costs incurred due to the spike in the cost of materials and to ensure all the planned work is completed.

TRANSACTIONS WITH THE GOVERNMENT

Following the extensive talks that have begun with the relevant Ministries and in accordance with that established by the Interministerial Committee for Economic Planning ("CIPE") in Resolution no. 4 of 2012, the company's relationships with the government are governed by two contracts:

- Government Programme Contract - Investments ("GPC-I"), regulating the sustainable planning and funding of investments to develop the railway infrastructure in order to improve service quality and ensure compliance with safety levels in line with technological developments, in accordance with new legislation and the national and EU strategic guidelines for financial planning.
- Government Programme Contract - Services ("GPC-S"), governing the availability of the infrastructure and, specifically, routine and non-routine maintenance on the infrastructure, as well as safety, security and railway ferrying.

The Government Programme Contract - Investments

In 2022, after internal checks and technical briefings with the ministers about a wide range of investments, the company drew up a draft contract for the new 2022-2026 GPC-I, which was discussed and signed by the parties in June 2022.

The draft contract complied with the railway mobility strategic document approved with MIT (then MIMS) decree no. 109 of 29 April 2022 and the Infrastructure Annex of the 2022 economic and financial document - Ten years to transform Italy - Strategies for sustainable and resilient infrastructure, mobility and logistics, published on 23 May 2022, which is Italy's official mobility planning document that identifies the infrastructure essential to develop the Country.

CIPESS approved the draft contract in its meeting of 2 August 2022 with resolution no. 25 published in the Italian Official Journal of 9 November 2022. CIPESS completed the authorisation procedure by signing it on 20 December 2022 making it effective with new funding of approximately €13 billion.

These new funds of €13,033 million, formalised in the new 2022-2026 GPC-I, will contribute to improving the railway service's performance and accessibility through:

- **completion of the Trans-European Transport Network (TEN-T network)**, which required work to upgrade railway lines to the European performance standards and to strengthen the TEN-T networks and Alpine passes. The European Commission has adopted a "Corridor" approach for the coordinated development of the TEN-T network, identifying nine core European network corridors, of which four are in Italy;
- upgrading and securing of railway circulation thanks to the **extension of the ERTMS to the entire network**. This system is currently in use on 758 km of HS lines, while it is being rolled out on the European corridors (1,500 km). The aim is to speed up the equipping of the entire network and the fleet with ERTMS by 2025, well in advance of the deadline established at European level (2050) so that the Italian railway system is one of the best in the world;

- heightened resilience to the climate crisis by **improving infrastructure resilience**, energy efficiency and safety in order to pre-empt the potential threats of drought and adverse weather events;
- **strengthening and extension of the HS network**, through greater connectivity and improved performances to be achieved by building infrastructure tailored to the requirements of each area thus facilitating integration and accessibility among the country's major urban areas. As well as building new lines and work to speed up and resolve saturation problems, HS north/south and south/west connections will be maximised;
- **improvement of regional** and inter-regional **networks** and railway hubs in cities and development of historic tourism lines, i.e., those "non national" railway networks with obvious potential but also critical issues;
- **upgrading of the domestic logistics system** by improving last mile connections with airports, ports and freight terminals;
- enhancing the **quality of stations**, which will be promoted as intermodal hubs and drivers for the sustainable development of the local area and its mobility system. Therefore, stations will be classified not only considering the number of passengers but also their role in the local urban and surrounding area, and their potential as a transport and services hub for passengers and their local areas;
- **technological innovation** to be developed in all the subsystems of the domestic railway infrastructure.

The new resources in the 2022-2026 GPC template are allocated as follows:

- €641.6 million to improve resilience (anticipate threats, address adversities and adapt to changes to create long-lasting value);
- €463.1 million for digitalisation and technological development (ERTMS technology on the entire network to better exploit the potential of the existing infrastructure);
- €259.6 million for the station accessibility project;
- €1,519.5 million for the development of regional systems (narrow the north/south infrastructure gap, improve the links with the interior and "slow" tourism with historical railways);
- €2,260.8 million to upgrade metropolitan hubs (improve accessibility, increase the quantity and quality of services to shorten travel times for commuters);
- €7,436.3 million for the extension of the HS network (network connectivity to link the country's main cities in less than four and a half hours);
- €452.0 million to upgrade rail connections to ports, airports and terminals (an increasingly interoperable and interconnected network with the main ports and intermodal hubs to support the Country's economic and industrial growth).

For approval purposes, this new GPC followed the procedure provided for by Decree law no. 152/2021 on "Emergency provisions for the implementation of the NRRP and the prevention of mafia infiltration", converted by Law no. 233 of 29 December 2021.

Government Programme Contract - Services (GPC-S)

In the first half of 2022, the preliminary activities were started with the MIT's competent offices to formalise the new 2022-2026 GPC-S and regulate the relationship between the company and the state in accordance with article 15 of Legislative decree no. 112/2015, as subsequently amended, and ensure the financial continuity of fundamental management activities and the routine and non-routine maintenance of the network over the next five years.

The new 2022/2026 GPC-S is a crucial stepping stone for the challenges of the next few years, in that it is an indispensable tool for ensuring an adequate flow of resources and financial stability for planning network maintenance.

The main new element of this contract is the transfer of a series of projects from the GPC-I to the new GPC-S, as they are closely related to the routine maintenance included in the GPC-S, again designed to strengthen the safety and accessibility of the National Rail Infrastructure and ensure a more efficient and effective programming and implementation with total funding requirements of €2.2 billion a year.

With respect to its financial aspects and due to the transfer of some projects from the GPC-I to the GPC-S, the new 2022-2026 contract has been assigned funding of €3.356 million a year, as follows:

- €1,155.56 million per year in the form of grants related to income for the 2022-2026 period for operations;
- €2,200 million per year in the form of capital injections for the 2022-2026 period for non-routine maintenance.

The current allocations envisaged by the legislation in force as per Law no. 234 (Government budget for the financial year 2022 and three-year budget for 2022-2024) mean that part of the above-mentioned funding requirements are met through:

- grants related to income (chapter 1541) of €1,155.56 million for 2022, €1,055.56 million for 2023 and €965.56 million for 2024;
- grants related to investments (chapter 7122-PG5) of €5,100 million to be disbursed as follows: €500 million in 2022, €1,000 million per year in 2023, 2024, 2025 and 2026 and €600 million in 2027.

The GPC-S also followed the new approval process provided for by Decree law no. 152/2021. CIPESS approved the contract in its meeting of 2 August 2022 with resolution no. 24 published in the Italian Official Journal of 9 November 2022. It completed the authorisation procedure by signing it on 20 December 2022 like for the GPD-I.

CUSTOMER RELATIONS

General information

As national railway infrastructure operator pursuant to Legislative decree no. 112/2015, RFI operates on a market that consists of railway companies and applicants. The latter, in addition to the railway companies, Regions and autonomous provinces, also include "the competent authorities under the European Parliament and Council regulation no. 1370/2007, loaders, shipment agents and combined transport operators, with a public service or business interest in acquiring infrastructure capacity for the purposes of providing railway transport services (article 3 of Legislative decree no. 112/2015)." The contract concerns, in the case of the former, standard hours and services - Infrastructure use contract with a term not exceeding the validity of a schedule, and in the case of the latter, the infrastructure's capacity in general terms or overall volumes, rather than in detail - Long-term master agreement.

Infrastructure use contracts

During the year, 43 infrastructure use contracts were signed, 18 of which for passenger traffic (17 as from 11 December 2022), 24 for freight traffic and one for technical runs used to test rolling stock.

The market consists of:

- 40 railway companies with valid railway licences issued by the MIT;
- one railway company with a European railway licence issued by the Austrian Ministry of Transport, Innovation and Technology (TX Logistik Transalpine GmbH);
- 38 railway companies (37 after 11 December 2022) that performed transport services after signing an infrastructure use contract.

At 31 December 2022, 35 master agreements were pending with the regions, autonomous provinces, railway companies and other parties with a commercial interest in the freight service.

Network Statement

In 2022:

- an extraordinary update was made to the **2023 Network Statement** (June 2022 edition), which now includes the correction and adjustment to the fees in line with the ART's official notice of 11 February 2022; specifically, the calculation of the fees for assistance provided for the circulation of special trains based on the local area involved was re-introduced while the fee for the notice board service was eliminated;
- an extraordinary update was made to the **2023 Network Statement** (December 2022 edition) and the **2024 Network Statement** was published. The latter includes, inter alia, the provisions that the ART specified in its decision no. 227/2022 setting out instructions and guidance on the 2024 Network Statement, presented by RFI, and the 2023 Network Statement;
- the **2024 Network Statement for Umbria's regional railway infrastructure** was published. It includes the provisions that the ART specified in its decision no. 214/2022 setting out instructions and guidance on the 2024 Network Statement presented by RFI for the regional railway infrastructure in Umbria.

On 30 June, in accordance with article 14 of Legislative decree no. 112/2015, RFI published on its website:

- a) the first draft of the 2024 Network Statement and the related accompanying report;
- b) the first draft of the 2024 Network Statement for Umbria's regional railway infrastructure and the related accompanying report.

The main changes introduced by the **2024 Network Statement** and the extraordinary update to the **2023 Network Statement** include:

- the obligation to publish a report containing information on the status of proposals made by stakeholders during the Technical Listening Table on infrastructure development, deemed worthy of investigation by RFI, and their consequent inclusion in the planning process and, hence, in the GPC;
- the obligation to provide regions, autonomous provinces and public administrations with free access to user information on PIC Web so they can carry out their institutional duties;
- introduction of train path requests for the freight segment through the Freight Operations Desk and launch of the trial use of this desk for path requests involving trains with loads of between 1,600 and 2,500 tons;
- the update of the penalty system for exceeding the stationing times in border stations, which will be applied from 1 January 2023, with the introduction of exclusion ceilings for variable penalties depending on the operations performed at the station and definition of a total penalty cap for both Italian and foreign railway companies equal to 3% of the total amount of fees paid for international paths (proprietary or third party) acquired to use the Italian Railway Infrastructure.

In addition and solely with respect to the **2024 Network Statement**, the following changes were made:

- the possible forwarding of train path requests for trains with loads of between 1,600 and 2,500 tons, to be presented by the applicant using the ASTRO-IF/PIC system, specifying whether the trains are assembled in accordance with the train composition and braking rules of article 60.3 of the PGOS-IF or based on the results of the analyses as per article 60.3-bis of the PGOS-IF, in accordance with RFI's resolution no. 8/2021;
- communication with respect to the introduction of train speed control systems and the preparation of the ERTMS development plan and the concurrent discontinuation of the TSCS/SSC systems;
- the obligation to inform the stakeholders of the list of stations that may possibly be closed and the related services before the Technical Listening Table about the development of infrastructure is held (requirement no. 2.3.3.2);
- inclusion of a description of the company's assistance provided to railway companies to assess the train-path compatibility, the related technical consultancy service and the issue of the conditions and measures to perform trial runs in accordance with RFI's resolution no. 12/2022;
- introduction of the possibility for RFI to recharge applicants the costs of infrastructure upgrades made to adapt such infrastructure for the terminalization of hazardous freight requested by them if it is not possible to perform such upgrades as part of its normal operations (i.e., under the GPC or using its own resources);
- the provision of more communications about estimates of electricity prices used to calculate and invoice the quarterly adjustments to the railway companies;
- introduction of timelines for the issue of authorisations for the circulation of special trains (e.g., exceptional transport);

- description of train rescue procedures in the event of PRM being present on board, as per the specific agreements entered into with the railway companies;
- obligation for the railway companies that intend to offer railway services inside RFI's maintenance facilities to be qualified as a plant operator and to comply with the disclosure obligations of Commission Implementing Regulation (EU) 2017/2177.

The most significant changes introduced by the 2024 Network Statement for Umbria's regional railway infrastructure include disclosure obligations vis-à-vis the railway companies and RFI as well as passengers. Specifically, if passengers are required to leave a train either at a station or between stations due to irregularities in the service and the blocking of the train, the railway companies are obliged to inform RFI of the existence and number of PRM, specifying the type of assistance necessary and the replacement services with buses or another train. In addition, passengers shall be informed of strikes in accordance with Regulation (EU) 782/2021 and ART decision no. 106/2018.

SERVICES PROVIDED BY THE INFRASTRUCTURE OPERATOR

The services provided by the infrastructure operator, broken down as per article 13.2 and following articles of Legislative decree no. 112/2015, are summarised below.

Minimum access package (MAP)

The infrastructure operator receives access fees for use of the infrastructure and ensures all railway companies that have been allocated train hourly paths are provided with the following services comprising the MAP, at fair and non-discriminatory conditions:

- a) processing of the requests for railway infrastructure capacity in order to sign the infrastructure use contracts: this includes all preliminary activities necessary for the signing of contracts with the railway companies;
- b) right to use assigned capacity;
- c) use of the railway infrastructure, including interchanges and connectors;
- d) control and regulation of train traffic, signalling and routing, as well as the communication of any information on train traffic management;
- e) use of the electrical system for train traction, where available;
- f) all other necessary information to provide or manage the service for which capacity has been granted;
- g) the sea link to/from Sicilia (Villa S. Giovanni - Messina) and Sardegna (Villa S. Giovanni/Messina - Golfo Aranci);
- h) infrastructure connecting to the service plant.

Revenue from tolls in 2022 increased by approximately 29% on the previous year bolstered by the greater train*km volumes in the year as a result of the easing of restrictions introduced to curb the spread of Covid-19, the smaller discount of component B for the long haul and freight market segments and the price effect. Ferrying revenue showed a modest increase on 2021 (+0.98%).

Plant with guaranteed access and related services

As the service plant operator, RFI provides all railway companies with fair, non-discriminatory and transparent access, including to the railway lines, the following service plants, where applicable, and related services:

- a) passenger stations, with respect to structures for travel information systems, adequate spaces for ticketing and other structures functional and necessary for railway operation;
- b) freight terminals;
- c) areas for assembling/disassembling trains, including space for shunting;
- d) areas, plant and buildings to park, shed and store and depot rolling stock and freight and areas for the procurement of fuel;
- e) maintenance centres, except for the heavy maintenance centres reserved for high-speed trains and other types of rolling stock that require specialised centres;
- f) washing sidings;
- g) infrastructure clearance using specially-equipped rescue vehicles;
- h) waste water discharge.

Revenue contracted slightly for nearly all these services in 2022 and mostly for the service to access and use freight terminals at the maintenance centres due to smaller demand and the station access and use service as a result of the prior year fee adjustments made in 2021.

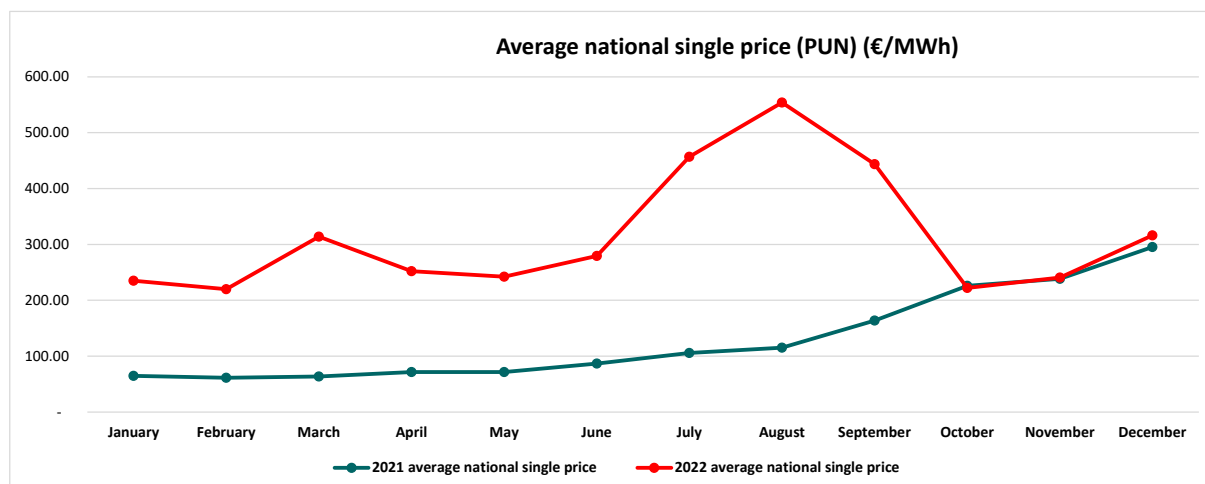
Additional services

As the service plant operator, RFI provides the following additional services to the railway companies upon their request, at fair, non-discriminatory and transparent conditions:

- a) supply of electrical energy for traction: for this service, RFI introduced a Data Collecting System (DCS) on 1 January 2022 to comply with Commission Regulation (EU) no. 1301/2014, amended by Commission Implementing Regulation (EU) 2018/868 and Commission Implementing Regulation (EU) 2019/776. The system is designed to correctly gather information from the EN 50463:2017 Real Meters installed on board the railway companies' rolling stock. The DCS interfaces with the PIC WEB IT system used by the railway companies to check their reported consumption data and, thus, be aware, for every train/day, of the actual energy consumption of each train over its journey which will be reported and invoiced.
- b) pre-heating, air-conditioning and power for on-board systems for the maintenance and cleaning of passenger trains and water on trains;
- c) traffic control for trains transporting freight classified as hazardous according to the PIC WEB IT system;
- d) traffic assistance with special trains carrying exceptional loads requiring specific authorisation to operate, the modification of infrastructure, etc.;
- e) shunting services at border stations and at the plants functional to the ferrying of passenger and freight trains;
- f) assistance to people with disabilities and reduced mobility (PRM);
- g) parking;
- h) fast track service.

Revenue from the supply of electrical energy for traction increased considerably, rising from €302 million in 2021 to €374 million in 2022 (up approximately 24%) thanks to both more operating trains than in 2021 and steadily rising energy prices, which brought the overall cost of electrical energy close to record highs. Specifically, spending for electrical energy for traction saw sharp year-on-year growth and an increase in the net cost that can be recharged to the railway companies, whereas in 2020 the cost of electrical energy had hit an all-time low since the start of the electricity market (since 2004).

Revenue from the other additional services grew 8% on 2021, mostly driven by the water service.



Auxiliary services

As the service plant operator, RFI can, at the request of the railway companies, provide the following auxiliary services at fair, non-discriminatory and transparent conditions:

- a) supply of complementary information such as loudspeaker announcements and the production of posters;
- b) access to the GSM-R telecommunications network for ground/train service links.

Revenue from these services increased slightly confirming their stable performance.

The Service Charter and Market Observatory

As it does every year, in 2022, RFI published its Service Charter (as per the Prime Minister's directive and Prime Minister's decree dated 27 January 1994 and 30 December 1998, respectively) on its website, which officially reports the 2021 results and 2022 targets for the quality of the services provided to the public in the areas identified by legislation (the quality factors), based on the characteristics of the company.

The Service Charter contains 15 indicators representing the company's various action and focus areas that are priorities for the public, the 2022 targets were all met for both delivered quality (which is assessed through internal/third party monitoring) and perceived quality (measured in customer satisfaction surveys conducted by the Market Observatory).

The company met the following **service quality** objectives:

- sustainability, covering both the environment and governance. With respect to environmental sustainability, according to the ENVISION protocol, the Company has kickstarted the certification of the first project for one of its stations based on the guidelines validated by ICMQ), which it used to adapt the international protocol for the sustainability certification of Italian-built works. It also launched the "RFI sustainability on the go" governance project to accelerate the integration of sustainability practices in all processes and at all levels in accordance with the path set out in the strategic action map for RFI's ESG transition;

- traffic safety and security;
- assistance to PRM. With a view to continuous improvement, training courses have been activated for Sala Blu staff aimed at maintaining and improving soft and technical skills, in addition, at least 110 projects were carried out to improve accessibility in the stations.

With respect to the perceived quality targets based on the percentage of satisfied passengers (scores of 6-9) with the services offered in the stations, the 2022 customer satisfaction survey, monitored by RFI's Market Observatory, show a modest improvement in the perception of overall quality of the stations (98.7%, +0.5 percentage points on 2021) while the other macro indicators were substantially stable.

An analysis of the surveys of satisfied passengers (scores of 6-9) shows a significant increase to 90.8% (+1.5 percentage points on 2021) in customer satisfaction with the "overall quality of the stations". This achievement was mostly due to the rise in the percentage of satisfied passengers with the "ease of reaching stations" (+2.2 percentage points on 2021). Commercial services (-0.6 percentage points), internal routes inside the stations (-0.6 percentage points), maintenance and upkeep (-0.5 percentage points), general information for passengers (-0.4 percentage points) and cleaning (-0.3 percentage points) all lost some ground while the other macro indicators were stable.

The survey of the Sala Blu services confirmed its excellent ratings achieved over the years with a percentage of satisfied passengers of 99% (average score of 8.6), proving their complete satisfaction with the service as a whole in 2022.

During the year, the RFI Market Observatory continued its normal survey activities which include the traditional customer satisfaction surveys, monitoring the mobility profiles and behaviours of passengers and their perception of security.

Punctuality

Train punctuality represents the quality of RFI's product. Real punctuality was used to measure punctuality performance in 2022, as it measures the performance perceived by customers directly.

Real punctuality (i.e., without excluding any trains) is the ratio of the number of trains that arrived within the punctuality threshold and the total number of trains in circulation (where NP is the number of trains that arrived, NC is the number of trains in circulation and real punctuality is equal to $NP/NC*100$).

The punctuality KPIs are defined as the ratio of trains that arrived within the punctuality threshold (based on pre-set parameters) and the total number of trains in circulation for a given segment.

RFI sets the punctuality targets at the beginning of each year, pursuing constant improvement.

The 2022 punctuality KPIs are as follows:

PUNCTUALITY KPIs	2022 real punctuality (%)	2022 objective (%)
Mainline trains - commercial service (within 10 minutes)	78.0	81.1
Mainline trains - universal service (within 15 minutes)	86.7	85.7
Regional trains (within 5 minutes)	90.4	90.2
Freight trains (within 30 minutes)	57.5	57.0

The 2022 punctuality indicators are in line with the company's targets for the universal service, regional trains and freight trains, while that for the high speed train service has not met the set objective.

Specifically, after a positive first quarter, the high speed train service saw a downturn in its performance mid year, mostly due to the generalised rise in traffic volumes and a greater number of breakdowns of infrastructure and rolling stock linked to the exceptional hot weather in the months from May to September. There was also an increase in certain external factors that have a strong impact on the regularity of trains, such as the presence of people and/or animals along the line and accidents involving people.

In the first two months of the year, the freight segment was affected by the limitations introduced by ANSFISA for carriages equipped with "LL" soles, which set a speed limit for freight trains consisting of carriages with these devices. ANSFISA's measure adversely affected the average punctuality indicators. In addition, another two factors contributed to this segment's negative performance, namely, the hacker attack on the FS Italiane group's systems in March, which made it impossible to reschedule the freight trains during the planned works, and the frequent delays in trains arriving from abroad at the border stations due to major works being carried out by the operators in the bordering countries (mainly Austria and Germany).

In 2022, traffic volumes were higher than one year earlier, mostly in the HS and universal service segments, which had been the most affected by the restrictions during the worst stages of the pandemic.

Traffic volumes have nearly returned to 2019 levels. Since March, HS volumes have reached almost 90% of the pre-Covid-19 traffic, while volumes have returned nearly at 100% in certain time brackets and for certain routes (especially in the afternoon and along the Milano-Roma route).

PARTNERSHIP BETWEEN THE EUROPEAN RAILWAY INFRASTRUCTURE OPERATORS

In 2022, RFI's obligations with respect to the four European freight corridors of Italian interest (Rhine-Alpine, Scandinavia-Mediterranean, Baltic-Adriatic and Mediterranean) focused on monitoring the operations and governance of these corridors as established by EU regulations and on projects necessary to ensure the renewal of its managers on secondment to other corridor bodies whose contracts expired during the year. In addition, the freight corridors of Italian interest continued to manage pilot projects, some of which RFI proposed, to improve international freight transport performance.

Specifically, the **Baltic-Adriatic corridor** conducted a case study to define new capacity allocation rules when the ICM (International Contingency Management) procedures are applied to manage unscheduled significant interruptions to international traffic. It also commenced the activities necessary to draft a terminal integrated capacity offer (the TICO project) and a Tarvisio project, assisted by the railway companies, to reduce the stationing times at borders.

The Brennero task force, which was set up in early 2020 upon the initiative of the CEOs of RFI, OBB-Infra and DB Netz to improve the freight railway performance on the Monaco-Verona line and which is coordinated by the **Scandinavian-Mediterranean corridor**, agreed to set up two permanent work groups:

- a joint group to monitor the railway performance on the Brennero line;
- a coordination group to identify better communication methods for operators and improved international train punctuality.

In addition to the activities carried out by the Volla Opicina task force, the **Mediterranean corridor** launched a structured process to discuss the scheduled interruptions to the Modane crossing with the railway companies.

In 2022, RFI was involved in the update of the list of railway investment projects for the four **Central TEN-T network corridors** of Italian interest (Rhine-Alpine, Baltic-Adriatic, Mediterranean and Scandinavian-Mediterranean), defined by Regulation (EU) no. 1315/2013.

It also concurrently worked with the Ministry to review the fifth edition of the CNC (Core Network Corridor) work plan drawn up by the European coordinators and published in the second half of the year.

The company also continued to liaise with the Ministry of Transport on the EU Council discussions about the proposed revision of Regulation (EU) no. 1315/2013, sharing specialist contributions, such as legislative amendments and possible changes to the TEN-T network maps. RFI will support the Ministry throughout the entire legislative journey to approve the new TEN-T Regulation, which should be adopted at the end of 2023.

MAIN EVENTS OF THE YEAR

February

Appeal against RFI – FCA (Fiat Chrysler Automobiles N.V.)

Ruling no. 3260 of the Court of Cassation was filed on 2 February whereby the Supreme Court rejected FCA's main appeal, declared RFI's cross-claim inadmissible, offsetting the costs between the parties and ordering them to pay the single court fee.

Therefore, the court confirmed in its entirety the Roma Court of Appeal ruling no. 5276/2015, which had upheld the appeal against the arbitration award of July 2013 filed by RFI, ordering that FCA return to RFI most of the amount paid by RFI to FCA as per the above arbitration award.

HS/HC Milano-Verona line: Brescia-Verona section

On 11 February, RFI and GC Cepav Due signed an Addendum (to the second Supplementary Document) for the set-up of a Technical Panel to settle the most important disputes between the customer and GC. On 20 June 2022, the parties signed a second Addendum (replacing the first one) to acknowledge the additional agreements reached by them and to fully define the Panel's operations.

HS/HC Verona-Padova line: Verona - Padova section 1st functional lot Verona-Vicenza junction

In accordance with article 4.4 of the second amendment, RFI and GC Consorzio Iricav Due signed change order 1 to the definitive design of the first functional lot for the Verona-Vicenza junction on 28 February. This change order modifies the jet grouting consolidation works for the GA01 tunnel.

While it does not impact the contract timeline, the change order reduced the lump-sum price of the first functional lot for the Verona-Vicenza junction by approximately €3.8 million. On 23 November 2022, the project coordinator signed resolution no. 1 approving the executive design of the non-location second change order in accordance with article 169.4 of Legislative decree no. 163/2006.

March

2022-2031 Business Plan

On 8 March, the company's board of directors approved the 2022-2031 Business Plan, which is part of the group's more extensive ten-year plan. More information is available in the section on such business plan.

Development of the Palermo-Catania-Messina railway line

On 18 March, with order no. 13, the commissioner approved the definitive design for Lot 5: Catenanuova - Dittaino section as part of the larger project to develop the Palermo – Catania - Messina railway line with the new Palermo-Catania connection.

Cyber attack

On 23 March, the FS Italiane Group's systems were attacked which led to delays and slow-downs on the railway network and the unavailability of the corporate intranet. Despite the prompt response by the Security&Risk/Cyber Security units and the group company FSTechnology to remedy the situation, the repercussions of the cyber attack continued for some months.

April

Decree law no. 36/2022

On 30 April, Decree law no. 36/2022 on “additional emergency measures for the implementation of the NRRP” was published in the Italian Official Journal general series no. 100. The decree law regulates certain aspects of interest to RFI (more information is available in the section on the legislative and regulatory framework).

June

FS Italiane Group’s new organisation

The FS Italiane Group’s new organisational structure entails, as from 1 June 2022, the creation of four divisions, each covering its respective business segment, Infrastructure, Passengers, Transport Logistics and Urban. RFI heads the Infrastructure division which comprises itself; its subsidiaries; Anas S.p.A.; Italferr S.p.A.; and Ferrovie del Sud Est S.r.l. solely for the railway infrastructure area. This division’s mission is to design, build, operate and maintain infrastructure networks for rail, road and motorway transport in Italy and abroad. The group also adopted a new two-level governance model for its management and coordination:

- at level 1: the parent Ferrovie dello Stato Italiane S.p.A., which defines strategies and financial policies by managing and coordinating the division heads;
- at level 2: the division heads which steer, coordinate and oversee the division companies in technical and operating terms (including risk management) by managing and coordinating them, either because they control the companies in their division or on the basis of dedicated contracts.

HS/HC Verona-Padova line: Verona - Padova section 1st functional lot - Verona junction - East entrance

On 28 June, the Extraordinary Government Commissioner signed order no. 7 authorising commencement of the procedure to approve the definitive design of the Verona East HS/HC junction. The procedure is underway and interested bodies are expected to present their bids.

Derailment of the rear locomotive of the Frecciarossa 9311

On 3 June, the rear locomotive of the Frecciarossa 9311 which left Torino at 8.50 am derailed near the Serenissima tunnel near Prenestina di Roma Station on the Torino-Napoli line. No one was injured and the investigation into the derailment is still ongoing.

July

Reorganisation of the management team reporting to the CEO and the general manager

On 6 July, the Deputy Directorate for General Development and Standards and the Deputy Directorate-General of Network Management Infrastructures were set up reporting directly to the CEO and the general director. Their mission is to: a) accelerate, including from a sustainability viewpoint, the achievement of the 2022-2031 business Plan’s strategic propositions; b) facilitate and speed up, as part of the NRRP, the roll-out of the investments in railway infrastructure to achieve the objectives within the timeframe established by the EU; c) build up the resilience of Italy’s railway infrastructure to pre-empt potential threats, take on adverse events and encourage climate resilience actions, guaranteeing high reliability, availability, regularity and punctuality standards to the railway companies and end users, also through the integrated and synergistic contribution of the company’s internal departments.

August

HS/HC Verona-Padova line: Verona - Padova section 2nd functional lot Vicenza pass-through

On 8 August, the extraordinary commissioner authorised RFI with order no. 8 to start the authorisation process for checking compliance with the definitive design for the second functional lot (Vicenza pass-through) for the design components included in the urban corridor identified by the Interministerial Economic Planning Committee (CIPE) with resolution no. 64/2020 approving the preliminary design. With the same order, the extraordinary commissioner also authorised commencement of the services conference as per article 167.5 of Legislative decree no. 163/2006 to obtain the Veneto Region's views on the location of the works covered by the change orders that are outside the urban corridor.

The compliance checking process began with the forwarding of the definitive design to the bodies on 8 August 2022 while the Services Conference met on 28 September 2022 to rubber stamp the works that are outside the urban corridor ratified by the CIPE. The process is still underway.

September

Intragroup financing raised by green bond placement - series 20 EMTN

On 7 September, FS Italiane S.p.A. placed its sixth green bond issue of €1.1 billion, settled on 14 September.

The proceeds from the placement are to be used to finance the group's eligible green projects as per FS Italiane S.p.A.'s Green Bond Framework, updated in June 2022.

FS Italiane S.p.A. used part of the proceeds to provide RFI with an intragroup loan of €200 million to finance green projects in line with above-mentioned green bond framework. Specifically, the loan will be used, for the first time, to finance completion of the HS Torino-Milano-Napoli railway line. All the financed investments comply with the EU taxonomy criteria as confirmed by the second party opinion obtained from Sustainalytics.

December

HS/HC Verona hub: West Entrance

On 20 December, the extraordinary commissioner approved the definitive design for the West Entrance of the HS/HC Verona hub with order no. 9 issued in accordance with article 4 of Law no. 55/2019 as subsequently amended. On 23 December 2022, the call for tenders for the executive design and civil works, permanent way system, electrical traction and technological systems was published.

2023 Budget Act

Law no. 197 "Government budget for 2023 and three-year budget for 2023-2025" ("2023 Budget Act") was issued on 29 December 2022. Reference should be made to the paragraph "Legislative and regulatory framework" for additional information.

HUMAN RESOURCES

RFI's workforce grew during the year (2,779 new employees versus 1,598 outgoing employees). The company intends to improve the generational mix and gain technological and professional skills to respond to the greater requirements of the NRRP and the consequent review of operating volumes.

Changes in RFI's workforce from 1 January to 31 December 2022 are described below:

- number of RFI employees at 31 December 2021: 27,892 (including 262 managers and 27,630 workers and junior managers).
- number of RFI employees at 31 December 2022: 29,073 (including 300 managers and 28,773 workers and junior managers).

Training

2022 saw the full return to all training activities, with the targeted use of the approach trialled during the pandemic which drew on the blended method to provide more hours of training (+16% on 2021) without excessive logistics costs. This led to over 450,000 person-days of training (380,000 person-days in 2021), with more than 25,748 participants (i.e., around 91% of the company's workforce).

The company also directed significant efforts at induction training for both current personnel and university graduates and experts, to speed up and help new resources navigate a complex company like RFI.

In addition, the company completed the e-learning path for its "Human Factor over all" project launched in 2021 to develop and spread a safety culture at all levels of the organisation and especially the operating personnel.

SUSTAINABILITY AND THE ENVIRONMENT

Governance, long-term sustainability goals and action areas

In 2022, amidst a domestic and European context dominated by the measures established for the economic and social recovery in the wake of the COVID-19 crisis, in line with the European Green Deal and the sustainable development goals of Agenda 2030, RFI has been called on to play a crucial role in defining and implementing the NRRP to be achieved by 2026.

RFI's investments in the NRRP, implementing Regulation (EU) 2021/241, were defined jointly with the MIT as they are functional for the growth and sustainable transformation of the country and its mobility system (accessibility and links between regions, the integration of various modes of transport, the attractiveness of the railway, the network's resilience and energy efficiency, interoperability and safety, etc.) and they are compliant with the "Do No Significant Harm" (DNSH) principle established in Regulation (EU) 2020/852 (the "Taxonomy Regulation") with respect to the six environmental goals identified in the same Regulation.

In this complicated framework, RFI has made a tremendous, accelerated development and management effort to implement the NRRP investments, alongside its other planned projects, while ensuring the quality of its infrastructure investments and the sustainability of all the processes that make up its entire value chain.

The aim of corporate governance is to more closely integrate sustainability in business strategies and operations in 2022, and many initiatives have been carried out to this end, the most of important of which include:

- roll-out of the operating phase of the "RFI sustainability on the go" change management project and related strategic action Map for RFI's ESG transition, which sets out the strategic lines of action to be followed to accelerate the integration of best sustainability practices in investments and, in general, in all business processes, taking a systematic approach. In 2022, the company opened more than 40 ESG focus areas. In June 2022, the project obtained international recognition from the UIC as a best practice of excellence in the sustainable transformation of Railways;
- the Company's contribution to the Group's 2022-2031 Sustainability Plan, promoting the initiatives included in the business plans of the company and its subsidiaries best able to contribute to the group's long-term objectives for a) Energy and emissions - carbon neutral by 2050 (including traction); b) Sustainable mobility - Passengers: 5% modal shift from private vehicles to shared, public and soft mobility by 2030 (15% by 2050) compared to the 2015 baseline; goods: 50% transport by road and 50% transport by rail by 2050 (journeys of more than 300 km); c) Security - Best in class in Europe. Vision: by 2050, zero deaths of passengers on FS Italian group vehicles (trains, buses and other mobility systems), of people involved in the railway ecosystem, employees of the FS Italiane Group and its subcontractors less 50% compared to the 2015 baseline of the fatal accidents on roads operated by Anas by 2030;
- the specific pledge, as part of the business targets shared by all group managers for the third consecutive year, to improve the group's sustainability footprint in terms of climate change mitigation. In 2022, the objective, which raised the bar compared to previous years, was tied to the 10% increase (4% in 2021) of the carbon efficiency indicator, calculated as the ratio of the economic value generated (determined as per international standards as the sum of revenue from sales and services and other income) by the FS Italiane group, to which RFI contributes, and the direct and indirect CO₂ emissions generated by the group in the same year compared to the 2021 baseline (VEG/CO₂ of €6,097/ton of CO₂). The latter is calculated using

the group's energy consumption (disclosed in its sustainability report and its non-financial statement as per Legislative decree no. 254/2016, subjected to a limited assurance engagement by the independent auditors). This energy consumption is converted into CO₂ using conversion factors defined by national and international bodies and considering the domestic energy mix;

- collaboration with MIT and MEF to define (in terms of strategies, methods, programmes, etc.) the new approach to the sustainable development of Italy's infrastructure as confirmed by the inclusion of SDGs in the new 2022-2026 GPC (app. 11) to which each type of investment provides a direct or indirect contribution in accordance with the Prime Minister's directive of 7 December 2021.

Sustainability reporting

In relation to the annual reporting of sustainability data, aimed at supporting both the Group's Sustainability Report and the Non-financial Statement integrated in the Report on the management of the consolidated financial statements of the Group pursuant to D. Lgs. n.254/2016, in 2022, RFI and its Subsidiaries conducted the 2022 interim report aimed at integrating non-financial information in the Parent Company's 2022 Half-Year Financial Report.

The 2022 sustainability reporting process then began in autumn 2022 at RFI and its subsidiaries Blufferies S.r.l., Blu Jet S.r.l., Grandi Stazioni Rail S.p.A. and Terminali Italia S.r.l. for the group's 2022 Sustainability Report and NFS. The reporting process was carried out in accordance with the specific internal guidelines, which each year update the deadlines, criteria, data sources and data collection and/or estimation methods in line with the parent's instructions. RFI reported roughly 300 quality and quantity indicators with the participation of around 50 central and local units and concurrently coordinated the reporting of some 190 indicators by each of the four subsidiaries involved in the 2022 process.

Compared to the previous year, RFI's 2022 energy and environment results highlight:

- an increase in overall consumption of **electrical energy for "internal use" other than traction** (~+5%) to ~478 GW in 2022, which represents a slight rise compared to the pre-pandemic period as well thanks to the introduction of new technological systems; there was a concurrent increase in the consumption of electrical energy for internal use certified with guarantees of origin thanks to the greater volume of green energy (up to 200 GWh/year, equal to 40% of the total requirements) supplied under a new contract in place since May 2022 (the remainder, like for the electrical energy for traction, is procured directly on the Borsa Elettrica (GME) under a contract with the energy services manager GSE), confirming the company's commitment to pursue sustainable policies to reduce emissions;
- an increase of 8.6% (for a total of ~5,600 GWh in the procurement of **electrical energy for traction** which RFI supplies to all the railway companies that operated on the national railway infrastructure in 2022, due to the higher traffic volumes during the year;
- no great change in the overall consumption of **diesel** (~1% - a total of ~19 million litres - due to greater consumption for both railway traction (~4%) and ferry services (~4%) and a decrease in consumption for heating (~-20%), thanks to the more efficient management of assets and the milder winter;
- less consumption of **natural gas**, down around 7% to an overall ~8.3 million smc in 2022, mostly as a result of the decommissioning of natural gas heating systems and gas switches;
- a roughly 3% reduction in **water** consumption, which totalled approximately 11 million cubic metres in 2022 due to the combined effect of less consumption for civil use (approximately -2%), linked to the

smaller withdrawals from the aqueduct and the closure of certain wells, as well as the smaller use of water (for industrial use) to wash trains (roughly -39% for about 140,000 cubic metres less than in 2021), as a result of the steady re-introduction of standard cycles after the end of the public health emergency and the increasingly precise recording of consumption;

- a decrease of around 17% in the generation of **waste** to approximately 247,000 tons in 2022, with both the smaller generation of special non-hazardous waste (sent for recycling down around 15%, sent for disposal down around 47%), due to smaller quantities of steel and copper cables, and special hazardous waste (sent for recycling down around 24%, sent for disposal down around 67%) as a result of the project to gradually replace creosoted wood sleepers with eco-impregnated wood sleepers or pre-compressed reinforced concrete sleepers, which have a smaller environmental impact. The ratio of non-hazardous waste (89%) to hazardous waste (11%) remained substantially unchanged in 2022 while the percentage of waste sent for recycling returned to 99%.

Environmental management

Again in 2022, RFI carried out numerous environmental protection and development activities as part of its environmental management system testifying its great commitment to sustainability. This system is part of RFI's integrated safety management system, which also covers the occupational health and safety management system and the train traffic and railway operations safety management system and is applied in the governance of activities carried out directly by company personnel as well as those performed by contractors.

On this basis, all the company's production units involved in managing environmental issues have environmental specialists who handle the preparatory and preliminary work, gather and process data and provide assistance for the performance of the environmental protection duties assigned to them. Environmental specialists also provide technical and operational support in the management of all environmental aspects relating to their respective units, such as waste, water discharge, issues connected with the noise created by line maintenance, water withdrawals, atmospheric emissions in connection with thermal plants, the use of hazardous substances for processing, the use of herbicides along the railway line, etc.. In addition to ensuring the proper management of environmental variables in compliance with regulations, the internal management system and the environmental policy, this type of organisation enables the company, which applies it extensively throughout its operating contexts, to maintain constant discussion and collaboration with all its key stakeholders at all levels, starting with government bodies for the land and environment, encourage coordination in this respect with other group companies, raise environmental awareness among RFI's personnel as much as its suppliers', and promote dialogue with associations and bodies representing passengers and the community.

During the year, new Procedures for the Environmental Management System and the Occupational Health and Safety Management System were issued regarding the Management of products and articles containing certain substances or mixtures as part of the "management of occupational health and safety in the temporary or mobile work sites".

The lists of occupational safety and environmental protection compliance obligations were also issued.

Company employees participated in the work groups set up by Confindustria to discuss the management of the environmental impacts of the introduction of new rules about waste traceability.

The following management activities were carried out for investment projects with particular environmental impacts:

- the soil use plan for the implementation of the Terzo Valico dei Giovi project and the Firenze bypass;
- planning and management of scraps for the Andora/Finale Ligure line;
- management of environmental aspects for the Passante di Palermo;
- management of environmental aspects in three procedures for the elimination of level crossings;
- management of the pre-screening procedure for the Bressanone general zoning plan;
- management of environmental procedures for the Circonvallazione di Trento;
- reclamation of Ferrovie Sud Est's areas known as "Area Fibronit-Immoberdan-FSE" for the development of RFI's related "Bari Sud Est" project;
- reclamation at the HS Bologna station and submission of the related reclamation plan.

As regards noise mitigation activities, the company examined and responded to approximately 220 reports of noise and vibrations received directly from individuals or local bodies or from RFI's local structures which requested technical support in this respect.

MACROECONOMIC CONTEXT

The major economies saw deceleration in 2022 with persistently high inflation and worsening financial conditions the principal factors holding back world growth. This gradually led to a downturn in consumption and investments. Moreover, uncertainty about the outcome of the war in Ukraine, China's weakened economy and, especially at the start of the year, the supply difficulties along the value chains heavily impacted the global economy cycle.

Inflation continued to soar throughout the year, reaching peaks not seen for decades while towards the end of 2022, prices kept rising in the EU although inflation showed signs of stabilising in the United States. The Euro's significant depreciation against the US dollar contributed to the spiralling inflation in Europe early in the year but this trend started to reverse in the fourth quarter.

The current inflationary wave, the strongest since the 1970s, has encouraged the central banks to tighten their monetary policies. Starting from July, the ECB in tandem with the Federal Reserve raised the official rate three times, the last of which in December, and it is expected to continue this pattern in 2023.

According to Prometeia estimates (December 2022), growth in global GDP and trade respectively came to +3.0% and +3.5% in 2022, down sharply on 2021.

International trade figures		2021	2022
GDP		<i>(% change on previous year)</i>	
	World	6.3	3.0
	Advanced countries	5.2	2.6
	USA	5.9	2.0
	Japan	1.7	1.2
	Eurozone	5.3	3.4
	Emerging countries	6.9	3.1
	China	8.1	3.3
	India	8.3	6.7
	Latin America	6.3	2.4
Oil (Brent price in US\$ per barrel)		70.8	99.3
International trade		9.5	3.5
<i>Source: Prometeia, December 2022</i>			

The Eurozone's economy performed well in the first six months of the year and continued to be strong in the third quarter despite the continuous sharp increases in prices caused by the energy crisis. Its good performance was mostly driven by household consumer spending after almost all the pandemic restrictions were lifted. The construction sector saw a deep slide in its performance in all the main European countries, certainly not helped by the lack of materials and qualified labour.

Italy's economy at +3.9% outperformed France (+2.6%), Germany (+1.9%) and the EMU average (+3.4%) but was below Spain (+4.6%).

Inflation in the Eurozone was 8.6%, up very significantly on 2021.

	2021	2022	2021	2022
GDP			Inflation	
	<i>(% change on previous year)</i>		<i>(% change on previous year)</i>	
Eurozone	5.3	3.4	2.6	8.6
Germany	2.9	1.9	3.2	8.9
France	6.8	2.6	2.1	5.9
Italy	6.7	3.9	1.9	8.1*
Spain	5.5	4.6	3.0	8.3
<i>Source: Prometeia, December 2022</i>				
<i>*source ISTAT, January 2023</i>				

During the year, the Italian economy grew at a much faster rate than that forecast in the spring after Russia's invasion of Ukraine. The main driver was domestic demand, pushed up by prolific household spending and the positive contribution of investments in operating assets.

Foreign demand shrank due to a combination of lively imports and weak exports, especially of services.

On the supply side, growth was nearly entirely seen in the commerce and the HORECA sectors while industry began to slow down.

Italy ended the year with a 3.9% increase in GDP over 2021. The national consumer price index grew 8.1% compared to the previous year.

2022				
GDP and main components	Q1	Q2	Q3	Q4
<i>% change on previous quarter</i>				
GDP	0.2	1.1	0.5	0.0
Domestic demand	-0.3	1.1	1.8	-0.3
Spending by households and private not-for-profits	-1.2	2.5	2.5	-0.6
Public administration spending	0.6	-1.2	-0.2	0.0
Gross fixed investments	3.8	1.5	0.8	-1.0
- construction	4.6	0.8	-1.3	-0.3
- other durable goods	3.1	2.2	2.9	-1.1
Exports of goods and services	5.2	2.1	0.1	-0.6
Imports of goods and services	3.8	2.1	4.2	-1.5
<i>Source: Prometeia, December 2022</i>				

FINANCIAL POSITION AND PERFORMANCE

For the purposes of describing its financial position and performance, the company has prepared reclassified financial statements in addition to those required by the IFRS adopted by the FS Italiane Group (as detailed in the notes). The reclassified financial statements comprise alternative performance indicators which differ from those directly derived from the financial statements and which management deems useful in monitoring the company's performance and in presenting the financial results of the business. Reference should be made to the section "Key and glossary" for a description of the methods used to calculate these indicators.

Reclassified income statement

	<i>millions of Euros</i>			
	2022	2021	Change	Change %
REVENUE	3,233	3,057	176	6%
Revenue from sales and services	3,075	2,892	183	6%
Other income	158	165	(7)	(4%)
Operating costs	(2,712)	(2,605)	(107)	4%
Personnel expense	(1,488)	(1,545)	57	(4%)
Other costs, net	(1,224)	(1,060)	(164)	15%
GROSS OPERATING PROFIT	521	452	69	15%
Amortisation and depreciation	(137)	(110)	(27)	25%
Net impairment losses	(102)	(69)	(33)	48%
Provisions	30	–	30	
OPERATING PROFIT	312	273	39	14%
Net financial income (expense)	(49)	2	(51)	(2,550%)
PRE-TAX PROFIT	263	275	(12)	(4%)
Income taxes	–	–	–	
PROFIT FROM CONTINUING OPERATIONS	263	275	(12)	(4%)
Post-tax profit (loss) from discontinued operations	–	–	–	–
PROFIT FOR THE YEAR	263	275	(12)	(4%)

The main changes in these captions between 2022 and 2021 are shown below. The reasons for such changes are detailed in the specific notes to the financial statements, to which reference should be made.

The €183 million increase in revenue from sales and services is partly linked to revenue that is offset by the related costs, which do not alter the company's profitability:

- higher revenue from traffic-related services of €71 million, generated by sales of electrical energy for traction pushed up by the sharp rise in prices (€34 million) and greater demand (€37 million), following the resumption of train traffic compared to 2021 when the Covid-19 restrictions were still in place. The upturn in revenue is partly countered by a similar increase in energy costs seen in the change in raw materials, consumables and supplies;

- greater revenue of €17 million from processing on behalf of third parties, mostly due to work on the Palermo metro rail (€11 million), the decommissioning of the Porta Romana hub (€9 million) and work on the Roma Lido railway line (€7 million) while revenue from construction and/or improvement works carried out as part of the Ferrovia Centrale Umbra management contract decreased by €10 million. The related costs, included under services, rose by €15 million.

The remaining part of the increase (approximately €95 million) is mostly due to:

- fee revenue and discounts (+€244 million).
Fee revenue increased not only due to the higher traffic volumes, especially in the Premium and Basic segment thanks to the easing of the Covid-19 restrictions (+€143 million) but also as a result of the smaller impact of legislation requiring the company to grant discounts to cover losses caused by the pandemic (+€101 million);
- grants related to Covid-19 (-€170 million);
Similarly to the discount, the grants disbursed under the emergency laws decreased to €130 million in 2022 (of which, €115 million provided under the former Decree law no. 4/2022 and €15 million under the former Decree law no. 115/2022 for the freight sector) compared to €300 million in 2021 (which included €150 million under Law no. 178/2020 and €150 million under Legislative decree no. 73/2021);
- reduction in the balance of performance regime and contract default penalties (€20 million) and smaller adjustments to prior year fee revenue (€114 million), which had benefited from the effects of ART decision no. 88/2021 in the previous year;
- a €90 million increase in the grants provided under the GPC-S and a €48 million increase in sundry revenue related to the release of provisions that were no longer needed in 2022;
- a €15 million increase in sundry service revenue compared to 2021, due to the higher revenue for sites and tunnels (€10 million) following the renewal of contracts with TIM and Vodafone and the settlement of trade receivables and payables with Wind for the period from 2019 to 2021, health services (€2 million), as a result of the greater number of medical check-ups, and fines and penalties (€3 million).

Other income decreased by €7 million, mostly due to the non-reoccurrence of events that took place in 2021 and specifically:

- smaller other penalties of €4 million, as a result of the recognition in 2021 of the recovery of fees relating to the sentence on the Cervaro-Bovino track doubling;
- smaller revenue from sundry services of €3 million, mostly due to the reduction of the fees charged to Terna for maintenance and remote operation services and to Wind for installation of the base radio.

With respect to the costs incurred in 2022, during the year, the company signed the contract renewing the national collective bargaining agreement, which had a significant impact on personnel expense. The accruals made during the years in which the agreement was under negotiation were excessive compared to that stipulated and, therefore, the company released €43 million. This cost saving was however partly countered by an increase of €17 million linked to the higher costs as a result of the larger workforce, additional remuneration and social security contributions as a result of the upturn in business after Covid-19, mitigated by savings generated by employee

turnover. With respect to labour disputes, the company accrued €7 million more than in 2021 while it released €12 million from the provision for leaving incentives (it had accrued €25 million in 2021).

As described earlier and partly caused by the adverse macroeconomic and European geopolitical situation, energy costs spiked in 2022, with an exponential upturn that had started in September 2021. This led to a significant increase in the cost of raw materials, consumables and goods although the subsidies provided for under the special tariff regime mitigated the higher cost of high voltage energy. Specifically, in 2022, the company incurred higher costs of €41 million for electrical energy and fuel (including €65 million due to price hikes, offset by great prior year adjustments of €24 million recognised in 2021 which did not occur in 2022) and of €93 million for lighting and driving power.

The rise in the cost of high voltage energy did not adversely affect the company's profit or loss unlike the rise in costs for lighting and driving power (medium voltage low energy), which are paid by the company.

In addition, the above conditions triggered a significant increase in the cost of raw materials, which rose by €36 million.

Moreover, materials used for investments (€132 million) decreased, offset by smaller capitalisations of materials for the same amount, recognised as self-constructed assets.

Service costs increased by €27 million for a multitude of factors, the key ones of which were:

- the approximate €15 million rise in IT service costs, including €6 million for the extra activities to deal with the cyber attack of March;
- the increase in energy costs, which drove up sharply real estate utility costs by €7 million;
- the changed market conditions pushed up the cost of third party liability insurance policies by €6 million;
- the easing of Covid-19 restrictions which increased travel and accommodation costs by €6 million, due to the greater mobility;
- the increase of €15 million in the cost of third party processing, in line with the variation of the related revenue item, related to work on the Palermo metro rail (+€10 million), the decommissioning of the Porta Romana hub (+€11 million) and work on the Roma-Lido railway line (+€6 million), partly offset by a reduction in the costs of maintaining the Umbria railway infrastructure (-€9 million) and the building of noise dampening barriers for BBT (-€3 million);
- smaller ordinary maintenance costs of €6 million, mostly due to the less work required to deal with natural disasters;
- smaller accruals and larger releases of €20 million, as a result of the positive development of court and out-of-court proceedings during the year, partly countered by a slight increase (€2 million) in the cost of professional services.

The cost of using third-party assets increased by €4 million due to the greater cost of leasing carriages.

The cost of self-constructed assets decreased by roughly €41 million due to the greater deployment of employees and higher indirect costs, tied to the intense investing activities carried out during the year. The reduction is due

to the smaller use of materials (€132 million) in line with the downturn in materials used for investing purposes, as described above.

Amortisation and depreciation increased by €27 million, in line with the growth in railway traffic.

Net impairment losses rose by €32 million, mostly due to the impairment losses recognised on financial assets, partly offset by the smaller impairment losses on land, plant and machinery.

The company's checks of the applications for access to the income and employment assistance fund during the year showed that the fund is greater than required and, therefore, it released €30 million.

The net financial income of 2021 worsened by €51 million to net financial expense as a result of the higher interest cost of €8 million on post-employment benefits, higher bank interest expense of €9 million, no longer covered by grants, and smaller financial income of €37 million due to the monetary revaluation of the assets from the railway companies provided for by ART decision no. 88/2021. The downturn in this caption is partly offset by less interest due to the parent (-€3 million) given the company's smaller exposure (mostly thanks to repayment of tranche 2 of the EMTN programme at the end of 2021).

Reclassified statement of financial position

	millions of Euros		
	31.12.2022	31.12.2021	Changes
ASSETS			
Net working capital*	(1,650)	(1,145)	(505)
Other assets, net	323	1,053	(730)
Working capital	(1,327)	(92)	(1,235)
Non-current assets	36,836	36,744	92
Equity investments	144	144	–
Net non-current assets	36,980	36,888	92
Post-employment benefits	(323)	(404)	81
Other provisions	(486)	(660)	174
Post-employment benefits and other provisions	(809)	(1,064)	255
Net assets held for sale	–	–	–
NET INVESTED CAPITAL	34,844	35,732	(888)
Net current financial position*	(1,321)	(388)	(933)
Net non-current financial debt	2,071	2,184	(113)
Net financial position	750	1,796	(1,046)
Equity	34,094	33,936	158
COVERAGE	34,844	35,732	(888)

*Financial assets for service concession arrangements at 31 December 2021 have been reclassified for a better presentation.

The main changes in these captions in 2022 are shown below. The reasons for such changes are detailed in the specific notes to the financial statements, to which reference should be made.

“Net invested capital” decreased by €888 million, due to the combined effect of a reduction in Working Capital (€1,235 million), other provisions (€174 million), post-employment benefits (€81 million) and Measure 1.6: Strengthening regional lines and the increase in net non-current assets (€92 million).

The reduction in working capital is the sum of the decreases in net working capital (€505 million) and other assets, net (€730 million).

Specifically, Net Working Capital decreased by €505 million due to the higher non-current and current trade payables (€386 million), mostly due to works contractors, smaller payments on account to suppliers (€2 million), smaller current and non-current trade receivables (€161 million), partly offset by higher inventories (€8 million), linked to the rising prices of raw materials and increase in contract work in progress (€26 million), mostly for the Palermo Metro rail.

Other assets, net decreased by €730 million, mainly as a result of the larger amounts due to the MEF, MIT and EU and others (€254 million), the net increase in the related payments on account (€1,225 million), greater other

current and non-current liabilities (€65 million), greater prepayments and accrued income (€4 million) and other tax liabilities (€5 million), partly offset by higher other current and non-current assets (€312 million), principally due to CSEA following the rise in energy costs compared to 2021 and smaller liabilities to social security institutions (€3 million).

The €92 million increase in net non-current assets is due to the rise in Intangible Assets (€128 million) and especially the NRRP projects, and Investment Property (€10 million), offset by the reduction in Property, Plant and Equipment (€46 million).

At 31 December 2022, post-employment benefits and other provisions decreased by €81 million and €174 million respectively. The reduction in other provisions is the sum of utilisations, releases and reclassifications (€191 million), partly offset by new accruals (€17 million).

Coverage decreased by €888 million as the net effect of the improvement in the Net current Financial Position by €933 million and net non-current financial debt by €113 million, partly offset by the €158 million increase in equity.

In detail, net financial debt improved by €1,046 million mainly due to the following:

- the improvement in the current net financial position (€933 million), due to the higher balance in the interest-bearing intragroup current account (€271 million) and the cash pooling account (€751 million), the increase in other current loan assets (€10 million), the reduction in current loans and borrowings (€12 million) and current lease liabilities (€3 million), partly offset by the rise in the current portion of non-current loans and borrowings (€107 million) and the reduction in financial assets for service concession arrangements (€7 million);
- the improvement in net non-current financial debt (€113 million), mostly as a result of the smaller bank loans and borrowings (€146 million), loans and borrowings from other financial backers (€19 million) and higher other non-current loan assets (€95 million), partly offset by greater non-current lease liabilities (€17 million), greater liabilities to parents (€110 million) and smaller assets for restricted current accounts (€20 million).

Equity recognised in the reclassified statement of financial position includes hedging derivatives. Therefore, the following reconciliation schedule is provided for greater disclosure:

	millions of Euros		
	31 December 2022	31 December 2021	Change
Reclassified equity	34,094	33,936	158
Hedging derivatives included in equity	1	(5)	6
TOTAL EQUITY	34,095	33,931	164

INVESTMENTS

NETWORK DEVELOPMENT

Like in 2021, the NRRP was a significant topic that dominated the year. Specifically, it includes financing of approximately €23,856 million for projects that RFI has proposed for the national railway infrastructure.

The infrastructure and technological projects in the railway sector consist of:

- developing the HS/HC infrastructure and speeding up the railway network for passengers and freight;
- completing the TEN-T railway corridors;
- completing the sections over mountain passes;
- strengthening hubs, major railway lines and regional networks;
- narrowing the infrastructure gap between north and south.

Details of the measures into which RFI's work has been classified and a brief summary of the progress of its main projects are provided below:

Measure 1.1: HS railway connections with the south

NRRP funding: approximately €4.6 billion for the following lines:

- Napoli – Bari: contracts for all the lots included in the NRRP have been awarded for railway lines of approximately 90 km; specifically, work is underway for the Orsara-Bovino, Canello-Frasso, Frasso-Telese, Telese-Vitulano, Apice-Hirpinia and Napoli-Canello lots;
- Palermo-Catania-Messina: for functional sections of approximately 150 km, for which negotiations are ongoing for Lot 3 Caltanissetta Xirbi-Lercara and Lot 4a Enna-Caltanissetta Xirbi; Lot 4b Dittaino-Enna and Lot 5 Catenanuova-Dittaino have been delivered. Lot 6 Catenanuova-Bicocca is under construction;
- Salerno-Reggio Calabria: the authorisation process was completed in December for Lot 1a Battipaglia-Romagnano and the interconnection with the Battipaglia-Potenza historical line and negotiations have commenced.

European and national milestones were reached in 2022, including:

- accounting recognition in line with the annual rate of progress with respect to total costs financed with the NRRP of 12.36%;
- awarding of public contracts for the construction of the high-speed rail on the Napoli-Bari and Palermo-Catania lines for the Orsara-Bovino, Catenanuova-Dittaino and Dittaino-Enna sections.

Measure 1.2: HS lines in the north connecting it with Europe

NRRP funding: approximately €8.6 billion for the following lines:

- Brescia-Verona-Vicenza: the Brescia-Verona section (roughly 48 km) and the Verona-Vicenza Junction section (roughly 44 km) are under construction with completion slated for June 2026.

- Liguria-Alpi: the works to bore the Terzo Valico dei Giovi and at the Genova hub are underway (percentage of completion of tunnel excavation work: 82% and 100% respectively). In December, the authorisation process was finalised and negotiations began for the laying of quadruple lines along the Pavia-Milano Rogoredo section (phase 1) and making the Milano-Genova line high speed. The upgrading of the Gallarate-Rho line (phase 1) has not yet received authorisation.
- Verona-Brennero (Circonvallazione di Trento): in September, negotiations commenced for the works to build the Trento bypass; they are still underway.

European and national milestones were reached in 2022, including:

- accounting recognition in line with the annual rate of progress with respect to total costs financed with the NRRP of 19.33%.
- start of the tender procedure for the assignment of Liguria-Alpi works.

Measure 1.3: Diagonal connections

NRRP funding: approximately €1.6 billion for the following lines:

- Roma-Pescara: authorisation for the priority lots has not yet been issued.
- Orte-Falconara: the authorisation process has been started for the doubling of the tracks on the PM228-Castelplanio section with the Albacina bypass and the new PM228-Albacina link.
- Battipaglia-Potenza-Metaponto-Taranto: the authorisation process is still underway for the priority work on the Grassano-Bernalda sub-section of the Potenza-Metaponto section. Negotiations have been commenced for the interconnection between the new HS Salerno-Reggio Calabria line and the existing Battipaglia-Potenza line as well as for Lot 1A HS Salerno-Reggio Calabria line.

Measure 1.4: Introduction of the European Rail Traffic Management System (ERTMS)

NRRF funding: approximately €3 billion. Both framework agreements for the executive design and implementation of the ERTMS on the lines covered by the NRRF have been finalised for a total of 32 contracts. In addition, the work on some priority sections (Breakthrough Program and DD) has been completed within the established timeline and using the established methods, achieving Italy's target of 312 km for 2022.

European and national milestones were reached in 2022, including:

- the European railway traffic management system has been implemented on 312 km of network;
- contracts have been awarded for the development of the European railway traffic management system.

Measure 1.5: Strengthening metropolitan railway hubs and key national connections

NRRP funding: approximately €3 billion. The upgrading of infrastructure and technology at the metropolitan railway hubs and key lines is under way and roughly 160 km has already been activated, meeting Italy's target of 150 km for 2022.

With respect to the authorisation processes:

- they have been completed and negotiations commenced in December for the following works: electrification of the Ivrea-Aosta line; electrification of the Palermo-Trapani (via Milo) line; Val di Riga variation (direct connection between the Brennero line and the Pusteria line) and Bressanone general zoning plan; upgrading of the Ponte S. Pietro-Bergamo-Montello line (phase 1); rail connection to Bergamo Airport; doubling of the Campoleone-Aprilia line; and upgrading of the infrastructure at the Brescia hub;
- they have commenced for the following works: general zoning plan and computerised interlocking system of the Cagnacco operating control line; Bolzano hub; Virgolo tunnel; redevelopment work at the Pigneto interchange hub; Torino hub - completion of the direct Torino Porta Nuova-Torino Porta Susa line.

European and national milestones were reached in 2022, including another 110 km (in addition to the 40 km scheduled for December 2021) of progressive improvement of the hubs and national railway lines (metropolitan hubs and key national connections).

Measure 1.6: Strengthening regional lines

NRRP funding: approximately €100 million for work on the national railway infrastructure.

In January 2022, RFI (as implementing entity recognised pursuant to MIMS decree no. 439/2021) signed three agreements with three different regional authorities (as beneficiaries of the financing) and the related regional railway infrastructure operator:

1. Piemonte regional authorities and GTT for projects on the Torino-Ceres and Canavesana regional railway lines (€120.5 million);
2. Friuli-Venezia Giulia regional authorities and Ferrovie Udine-Cividale for infrastructure and technological projects on the Udine-Cividale line (€41.09 million);
3. Umbria regional authorities for infrastructure and technological work on the entire "Ferrovia Centrale Umbra" line, which RFI took over as operator on 3 July 2019 (€163 million).

Measure 1.7: Strengthening, electrification and resilience-boosting of the southern railways

NRRP funding: approximately €2.3 billion. The design activities for the main projects are under way.

Specifically, the authorisation process has been completed and negotiations commenced for the following projects: completion of the Ferrandina-Matera line, doubling of the Codogno-Cremona-Mantova line (phase 1); completion of the Salerno Arechi-Pontecagnano Airport connection; Brindisi Airport connection; Catania hub - lengthening of tracks.

Furthermore, the authorisation processes have begun and are still in progress for the updating and implementation of faster speeds on the Jonica railway line - Sibari-Melito Porto Salvo section and the Lamezia Terme-Catanzaro Lido section and the electrification of the Barletta-Canosa section.

Measure 1.8: Improvement of railway stations in the south

NRRP funding: approximately €700 million to redevelop 38 railway stations in the south to improve the buildings' functionality, the service quality, energy efficiency and to develop a rail-road intermodal system, minimising the

environmental impact. In 2022, planning activities for 12 stations commenced achieving Italy's target for 2022. Specifically, planning activities of the works to be performed at the Acireale, Acquaviva delle Fonti, Brindisi, Crotona, Napoli Centrale, Nocera Superiore, Potenza Centrale, Potenza Superiore, Reggio Calabria Lido, Rosarno, Sarno, Siracusa, Teramo, Torre del Greco and Marsala stations were started.

In addition, six projects were kicked off in 2022 (i.e., work on the projects for the Scalea S. Domenica Talao, Vibo Valentia-Pizzo, S. Severo, Giovinazzo, Sapri and Milazzo stations).

Definitive national and European milestones were reached in 2022, including the start of planning to improve 12 railway stations (operated by RFI) in southern Italy.

Progress of investments

In 2022, infrastructural investments totalled €5,930 million, up by €339 million (roughly 6%) on the previous year.

Investments of approximately €3,369 million were allocated to large-scale infrastructural projects and roughly €2,561 million to maintain the efficiency of infrastructure and for work throughout Italy (including €282 million for technology-related projects).

Main investments in railway operations

In March, the first phase of the electric substation with functioning plant as an electric traction station within the Bramante electric substation as part of project to lay quadruple tracks on the Torino Porta Susa-Stura line was initiated.

In the second quarter, the computerised interlocking system reconfiguration was activated at Capua and the Brescia hub, both to resolve non-compliance issues.

As part of the work at the Napoli hub, the reconfiguration of the Pontecagnano computerised interlocking system and one phase of the computerised interlocking system at the Napoli Centrale Station were activated.

With respect to the technological upgrading of the Monza-Chiasso line, the Chiasso interface and the ERTMS level 2 regime (overlapped) on the Chiasso-Desio section were activated; work was also carried out on the Milano-Chiasso line for the distancing systems in order to increase the capacity of the Milano hub. The ERTMS level 1 regime (overlapped) was also activated on the Stabio- State border(km 3) section and the Ventimiglia-Bordighera (4.75 km in the west-east direction) section.

In June, the fire evacuation points in the Ognina tunnel, which is part of the Messina-Siracusa track doubling project were activated. In Sardegna, the central computerised multi-station system and the TSCS were activated on the Cagliari-Decimomannu (16 km) line with multi-station peripheral positions at Decimomannu, Elmas, Cagliari. The TSCS was also rolled out on the following sections: Corteolona-Casalpusterlengo (22.5 km), Foggia-Manfredonia (35.6 km), Fornaci di Barga-Lucca (31.9 km) and Legnago-Rovigo (47 km), Piazza Serchio-Fornaci Di Barga (25.5 km), Alano-Montebelluna (17.4 Km), Lentini Dir-Caltagirone (66.3 km), San Piero a Sieve-Borgo San Lorenzo (4.762 km), Vicenza-Dueville (29.69 km), Mercato S. Severino-Borgo (9.1 km) and Conselice Z.I.-Lavezzola (3.68 km).

In August, the central computerised multi-station system at the Firenze hub was reconfigured and the dead end tracks of gate 2 were activated at the Trieste Campo Marzio station.

In the last quarter of the year, the new Milano Tibaldi station was opened and the functional phase 2 of the Arezzo Sud (i)-Orvieto Sud (e) section was commenced as part of the upgrading of the HS Direttissima Firenze-Roma express line.

Other roll-outs related to the control system with multi-station computer-based interlocking systems on the Voghera-Broni section (21.37 km), the axle counter block system on the Valmadrera-Lecco section (3.7 km), the control system/computerised traffic control system/central computerised multi-station system on the San Piero a Sieve-Borgo San Lorenzo section (4.76 km) with the related provisional operating control lines in the S. Piero a Sieve and Borgo S. Lorenzo stations, the control system/computerised traffic control on the Lavezzola-Lugo section and the computerised interlocking system at the Cantalupo, Valmadrera, Macerata and Tolentino operating control lines. Reverse flow operations were rolled out on the Alessandria-Cantalupo operating control line (7.5 km).

48 level crossings were eliminated.

Key projects

In January, the definitive designs for the laying of quadruple tracks leaving Brescia Est as part of the HS/HC Milano-Verona line: Brescia-Verona section, Bolzano computerised interlocking system, Ronco Scrivia general zoning plan as part of the technological upgrading of the Tortona (e)-Bivio Fegino(i) line and the platforms and fourth terminal as part of the upgrading of the Quadrante Europa in Verona were completed. The definitive design for the Vicenza pass-through, part of the HS/HC Milano-Verona line (Verona-Vicenza section) was finalised.

In February, the definitive designs for the technological upgrades as part of the doubling of the tracks of the Lunghezza-Guidonia line and the HS/HC hub in Verona (East Entrance) were completed.

In March, the definitive design of the adaptation to the PC/80 gauge of the Emilia side of the tunnels as part of the performance upgrading of the Scandinavian - Mediterranean Tyrrhenian area corridor has begun. The company also completed the definitive designs of the underground work for the Catania station, the electrification of the Ivrea-Aosta line, the upgrading of the Chivasso-Aosta line and the Modena traffic control-computerised interlocking system as part of the Bologna-Piacenza technological upgrade.

In April, the company finished the definitive design of the new general zoning plan for Vado Ligure (phase 2). It commenced the definitive design for the replacement of the track for stationed trains at the Bari Centrale station as part of the repair of the Bari hub and the reconfiguration of the Bovino-Cervaro computerised interlocking system with the Foggia computerised interlocking system as part of the laying of double tracks on the Pescara-Bari section;

In May, it completed the definitive designs for technological upgrades as part of the strengthening of the Padova-Castelfranco line and noise dampening barriers as part of the strengthening of the railway plants serving the Trieste port.

In June, the company commenced the definitive design for the general zoning plan for the Pescara Terzo Binario, the reconfiguration of the computerised interlocking system at Ortona north as part of the laying of double tracks on the Pescara-Bari section, the Bergamo general zoning plan and the Palermo-Catania line ERTMS. It completed the definitive designs for the new Palermo central command station, the San Donà operating control line as part of the upgrading of the Venice-Trieste line, phase 2 of the multi-station command and control system as part of the technological upgrading of the HS/HC Roma-Napoli line and updating the PC80 track bed on the Emilia side of the Bologna-Prato line.

In July, the company started the definitive designs for the substitute works to eliminate the level crossing at km 61+321 on the Fossano-Cuneo line, the Verona Quadrante Europa's computerised interlocking system, technological completion of the Udine-Ronchi Legionari Nord section, conversion of the Catania Fontanarossa stop into a station, set-up of the Torino Lingotto central command station and the new Reggio Calabria central command station. Lastly, the company completed the definitive design for the Maddaloni-Cervaro operating control line computerised interlocking system 2 in the Apice-Hirpinia lot, the DOTE HS/HC Roma-Napoli and the Piazzale IS Prenestina.

In August and September, it completed the definitive design for renewal of the Cagliari central command stations, electrification of the Barletta-Canosa section and the Cutro tunnel in the electrification of the Catanzaro-Crotone-Sibari section. It also commenced the definitive design of the computerised interlocking system for the Verona Quadrante Europa and the rail connection with the Guasticce intermodal freight terminal.

In the fourth quarter of the year, the company commenced the definitive design of the new central command station in Reggio Calabria while it completed the definitive designs of the Milano Centrale general zoning plan and computerised interlocking system, the Lamezia-Settingiano upgrading, the Bolzano computerised interlocking system, the infrastructure and technological upgrading of the Aurisina junction-Villa Opicina section, development of the Nord central command stations, restyling the Pisa central command station and the Bergamo general zoning plan.

INTEGRATED TECHNOLOGIES

RFI has made technological innovation a priority, and it is through technological innovation that the company has not only developed infrastructure but stayed a step ahead of the times and made the Italian railway one of Europe's safest. Developed according to the plans set forth with the government to improve infrastructure performance in terms of safety, speed, capacity, punctuality, the quality of services provided to railway companies and passengers, railway technologies encompass all electromechanical, electronic and automated plants and systems controlled by ground and on-board operators and help ensure traffic safety throughout the network, while also supporting and increasing the efficiency of all other processes for railway operation, line maintenance, public information, network electrification and remote monitoring of proprietary assets.

As part of this far-reaching transformation and upgrading of its technology, RFI developed a plan to fast-track the implementation of the ERTMS (European Rail Traffic Management System) proposed to the MIT in 2018 and presented to key stakeholders during a specific workshop in late 2018. In 2022, another multi-technological contract was awarded for the design and development of the ERTMS throughout Italy, covering lines extending for a total of around 4,200 km, in line with the commitments under the NRRP. The tender was divided into four geographical lots to ensure that the system's technology is consistent: Centre North, Centre South, Centre and South.

The Radio Block Center (RBC) regulatory plan was issued, providing an overview of the jurisdictions of the RBC/train distancing systems that have already been activated or will soon be developed (up to 2027) and the possible strategy for completion of the RBC/train distancing systems across the entire network by 2036, in order to maximise the technological singularity of systems with specific regard to the ERTMS at central command stations.

In December 2022, the company began to check its executive design for the Lamezia Terme-Catanzaro Lido.

As part of the land/train integration on lines equipped with ERTMS, a coordination panel was set up with the MIT and the railway companies to harmonise the schedule for the land/train development of the ERTMS fast-track plan. All stakeholders were asked to update the ERTMS plan schedule, in line with the progress of the designs, which began in the fourth quarter of 2022 and which should be issued in the first few months of 2023. The integration process for the following has been completed:

- SSB Alstom ERTMS B3 MR1 on ETR675 (Italo) on the HS/HC Roma-Napoli line;
- SSB Alstom ERTMS B3 MR1 on ETR204 (Trenord) on the ERTMS level 2 Novara-Rho line;
- SSB Progress Rail ERTMS B3 MR1 on Traxx DC3V (Medway) on the HS/HC Firenze-Roma line.

EU FUNDING OF INVESTMENTS

ERDF resources - 2007-2013 NETWORK AND MOBILITY NATIONAL OPERATING PROGRAMME

The planning is complete and the definitive assignment of the grants is subject to the European Commission's definitive approval of the final execution report, pending the conclusion of checks on reported expenditure by the other beneficiaries of this Programme.

ERDF resources – 2014-2020 INFRASTRUCTURE AND NETWORK NATIONAL OPERATING PROGRAMME

The 2014-2020 infrastructure and network national operating programme was approved with the EU decision on 29 July 2015.

RFI has received financing for works to complete the previous 2007-2013 programme and for new projects entirely covered by the current programme for total costs for which reimbursement can be claimed of roughly €1.099 million, corresponding to a grant of €996.1 million, net of the funding gap.

In 2017-2022, RFI submitted reimbursement requests for €966 million and the MIT approved €710.4 million, leading to collections of €708 million, €152 million of which was collected in 2022. RFI will presumably collect the remainder in 2023, net of the expenditure not considered eligible.

ERDF resources - 2014-2020 Regional Operating Programme

RFI has been assigned resources of €450 million, net of the funding gap, for the regions of Campania, Sicilia, Calabria and Basilicata for thematic objective 7.

It requested reimbursement of €360 million in 2022.

Connecting Europe Facility (CEF) - Programme for 2014-2020 and 2021-2027

The amount financed to date for the 2014-2020 programme is €134 million.

During the year, RFI received €3.70 million related to the "ERTMS on strategic sections of 3 CNCs" and "ERTMS trackside equipment on Italian sections of the ERTMS Corridors/Core Network Corridors in compliance with the Breakthrough Program" projects.

As part of the new 2021-2027 programme, in January 2022, RFI presented six projects for the General Envelope and Military Mobility as part of the CEF Transport 2021 call for tenders, of which five were accepted. The grant agreements were signed in October of the same year providing the company with €111.72 million, €41.64 million of which it received in December 2022 as pre-financing.

Again as part of the 2021-2027 programme, RFI presented a project for the second CEF Transport 2022 call for tenders, the publication of which was brought forward by the European Climate, Infrastructure and Environment Executive Agency (CINEA) to 12 May 2022 solely for Military Mobility given the geopolitical situation. In accordance with the presentation deadline (29 September 2022), RFI presented its "*Upgrading projects to 740 m train length of several stations on the Tyrrhenian Railway line*" project. It was not deemed eligible for co-financing.

On 13 September 2022, CINEA published the remaining CEF Transport 2022 call for tenders and RFI presented six proposals (two as coordinator and six as promoter) for the General Envelope within the deadline of 18 January 2023. It applied for grants of €49.90 million.

The results of the tender will be made public in the first half of 2023 and any Grant Agreements will be signed by October 2023.

INFRASTRUCTURE

STATIONS

Stations have historically evolved in line with mobility trends and changes in their surrounding environment. RFI has worked for years to develop a new concept of a station for its more than two thousand stations as an intermodal hub and focus point for sustainable cities. Railway stations will become multi-service hubs, homes to integrated and sustainable mobility rather than the traditional transit places where passengers arrive and leave a building. They will represent cultural, social and economic values with a low environmental impact.

The implementation of this project requires both direct intervention by RFI and joint actions entailing the involvement of institutions and local bodies.

RFI's direct actions include the now completed design (in 2022) of the second development phase of StationLAND, a location intelligence platform that can provide information (data, floor plans, geographical information, transport information, etc.) concerning the railway stations and the local area. The intention is to make RFI's stations easily accessible and integrated into their local area. Redevelopment and non-routine maintenance works at around 22 stations have commenced while the definitive technical-economic feasibility projects for about 25 stations located around the country have been completed.

In 2022, many stakeholder engagement initiatives involving the MIT, regions, metropolitan cities and municipalities) were consolidated in order to promote the central role that railway stations play and their integration with their respective cities within development policies and local land and mobility plans.

RFI's participation in the development of sustainable urban mobility plans falls into this context of joint actions with other bodies. These plans were defined in Ministerial decree of 4 August 2017 in order to plan transport integrated with the urban and local structure and development.

During the year, the intermodal transport memorandum of understanding was signed with the Liguria regional authorities, supplementing those signed with other regions starting from 2020. They provide for the promotion of the accessibility of railway stations, as a hub of integrated and sustainable mobility in urban centres.

The company engaged in two important sustainability projects:

- the design and building of two cycle paths connecting stations to university campuses financed by the MIT with the general director's decree no. 73 of 14 March 2021;
- the roll-out of economic and technical feasibility projects to assess the installation of solar panels at railway stations and their car parks. It identified stations with suitable characteristics to start the planning of the installation and commissioning of photovoltaic panels both on the station roof and on special shelters in the car parks.

With respect to service quality, RFI launched a pilot project at the Roma Termini station in December 2022. It involves a team of people based in the station to listen to passengers and provide information, thus facilitating access to railway and station services. Lastly, during the year, the company continued its initiatives to contain the spread of Covid-19 at stations, mainly through disinfection and sanitisation activities.

RAILWAY OPERATING SAFETY

Safety (rate of railway accidents)

Safety targets are monitored for the national railway infrastructure that RFI manages using the indicators identified in accordance with current legislation and the data stored in its specific database (the "dangers database") and the current international criteria endorsed by the ERA (European Railway Agency).

The main indicators used to monitor safety performance are as follows:

- common safety targets;
- significant accidents (train collisions, train derailings, accidents at level crossings, fires on board rolling stock, injuries to people involving moving rolling stock, except for suicides and attempted suicides, other);
- rate of total accidents for which RFI is responsible;
- significant accidents for which RFI is responsible;
- "typical" UIC accidents.

For some of these indicators, the ERA has prepared and assigned CST¹ at European level and NRV² at national level, based on historical data.

The table below compares the infrastructure operator's cumulative performance in each risk category and for each indicator defined (measured in FWSI³ related to the "Basis of calculation") with the CST and specific NRV for Italy.

Categoria di rischio	Unità di misura	Basi di graduazione	OBIETTIVI		VALORI REGISTRATI
			CST	NRV	Consuntivo 2022
			COMUNI (x10 ⁴)	ITALIA (x10 ⁴)	RFI (x10 ⁴)
1. Passeggeri	1.1 Numero di passeggeri FWSI per anno derivante da incidenti significativi/numero di km-treno passeggeri per anno	Km-treno passeggeri per anno	170,00	38,10	10,10
2. Dipendenti o Imprese Appaltatrici	Numero di dipendenti FWSI per anno derivante da incidenti significativi/numero di km-treno per anno	Km-treno per anno	77,90	18,90	5,67
3. Utilizzatori dei passaggi a livello	Numero di utilizzatori di passaggi a livello FWSI per anno derivante da incidenti significativi/numero di km-treno per anno	Km-treno per anno	710,00	42,90	19,98
4a. Altra persona sul marciapiede	Numero annuale di FWSI a persone appartenenti alla categoria «altri» derivante da incidenti significativi/numero di km-treno per anno	Km-treno per anno	14,50	6,70	0,00
4b. Altra persona che non si trova sul marciapiede					
5. Persona che attraversa indebitamente la sede ferroviaria	Numero di FWSI a persone per anno derivante da incidenti significativi/ numero di km-treno per anno	Km-treno per anno	2050,00	119,00	189,53

The analysis in the table shows that the only target above the NRV but below the CST was that for people entering or crossing the railway tracks in violation of rules (violation of safety regulations by non-railway system people). In any case, this indicator cannot be considered definitive and could be subject to change based on the findings of the competent authority in its investigation of suicides/attempted suicides.

¹ Common safety targets;

² National reference values: these are, for each of the CSTs considered at European level, the specific value assigned to the railway system in each member state.

³ FSWI - Fatalities and Weighted Serious Injuries.

Significant accidents⁴ are particularly important given the gravity of their consequences. In 2022, there were 114 events. The increase on 2021 was mostly due to the rise in “Injuries to people involving moving rolling stock” (+32), which in any case currently include possible suicides/attempted suicides that the competent authority has not yet declared as such. The analysis of causes of accidents shows that approximately 92% were due to “external” causes, i.e., those beyond the scope of the railway system. The number of events due to “internal” causes went from 16 in 2021 to 9 in 2022. Significant accidents are broken down by absolute value and type in the table below, which indicates events in 2022 compared to 2021 data which are now definitive.

CSI accidents (ERA classification)	Accidents (number)	
	2022	2021
Train collisions	4	5
Train derailings	1	1
Accidents at level crossings	12	7
Fires involving rolling stock	1	0
Other	3	12
Injuries to people involving moving rolling stock	93	61
Total	114	86

In addition to being monitored according to the ERA classification, safety performance is also monitored internationally according to the UIC’s criteria, which exclusively consider the effects of the railway service and therefore exclude people being run over, damage to people when they unduly board/deboard moving trains, suicides and attempted suicides.

“Typical” accidents according to the UIC are classified as follows: collisions, derailings, fire on rolling stock, accident involving hazardous freight, accidents at level crossings (collisions against obstacles or vehicles). This type of classification is used to measure the safety of railway systems giving less importance to accidents due to misconduct by external people (violations of Presidential decree no. 753/80). There were two fewer typical accidents in 2022 for which RFI was at fault than in 2021.

To boost train traffic safety, RFI is committed to the constant protection, maintenance and upgrade of the infrastructure and its technological equipment, as well as the development of new lines and plants and fine-tuning increasingly effective production and management procedures.

RFI conducts all business activities that have an even indirect impact on train traffic safety within the framework of the corporate safety management system. Authorised by ANSFISA (the national railway, road and motorway infrastructure safety agency) in the safety authorisation it issued to RFI in June 2014 pursuant to Legislative decree

⁴ The ERA’s definition of significant accident: any accident involving at least one rail vehicle in motion, resulting in at least one killed or seriously injured person, or in significant damage to stock, tracks, other installations or environment, or extensive disruptions to traffic. Accidents in workshops, warehouses and depots are excluded.

no. 162/2007, the corporate safety management system is one of the three components of the integrated safety management system, which also comprises the environmental management system and the occupational health and safety management system, certified under the ISO 9001 standard, and ISO 14001 and OHSAS 18001 standards respectively.

Integrated safety management system

With respect to the activities related to the integrated safety management system, the audit performed by the certification body, Rina Services S.p.A., for the renewal of the integrated safety management system's certification under UNI EN ISO 9001:2015 at the Carini (Palermo) national works vehicles workshop was successfully completed in January. The certification body also completed its audit for the renewal of the integrated safety management system's UNI EN ISO 14001:2015 and UNI ISO 45001:2018 certification in March for the same workshop.

In addition, in October, Rina Services S.p.A. carried out the first surveillance audit of the integrated safety management system after the three-year renewal of its UNI EN ISO 9001:2015, UNI EN ISO 14001:2015 and UNI ISO 45001:2018 certifications in July 2022.

Annual safety report - 2021

In May 2022, the Annual Safety Report for 2021 was prepared and submitted, in accordance with ANSF guidelines no. 5841/2016 of 25 May 2016 and Decree no. 50/2019, for the "Implementation of Directive 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety".

The Annual Safety Report was sent to ANSFIFA on 30 May 2022 and includes:

- data on how internal safety objectives and safety plan results are achieved;
- the calculation of national safety indicators and CSIs;
- the findings of the internal safety audits;
- observations on weaknesses and malfunctioning of railway and infrastructure operations that could be of concern to ANSFISA;
- the data and information that ANSFISA requests on an ongoing or occasional basis;
- the application of the common safety methods.

Annual integrated safety plan

The annual train traffic and operating safety plan (ANSFISA decree no. 10/2009) and the annual occupational safety and environmental protection plan are company tools to plan and monitor initiatives in place to maintain and improve safety. Together, they constitute RFI's integrated safety plan.

The general principles used in the annual train traffic and operating safety plan to identify the planned mitigation actions are described in RFI's integrated safety policy: "... reduce railway accidents to zero ...".

Similarly, the general principles used in the annual occupational safety and environmental protection plan to identify the planned mitigation actions are also described in RFI's integrated safety policy: "... reduce accidents in the workplace and adverse impacts on the environment to zero ...".

Safety authorisation

ANSFISA renewed the company's safety authorisation on 20 December 2021. During 2022, RFI was able to maintain such authorisation thanks to the proactive and constant commitment of all its departments involved in the corporate safety management system.

Integrated safety policy

The integrated safety policy expresses RFI's formal commitment to managing railway traffic safety, occupational safety and environmental protection, key pillars of the company's mission. The policy, which defines safety guidelines and macro-objectives, is periodically assessed to ensure that it is always consistent with the type and extent of services provided by RFI.

The general guidelines established in the integrated safety policy are specifically described in the train traffic and operating safety policy, the occupational health and safety policy and the environmental protection policy which was updated in November 2022.

INFRASTRUCTURE SAFETY

Tunnel safety

On 9 August 2022, RFI sent the MIT and ANSFISA the annual railway tunnel safety report for 2021, as required by article 14 of Ministerial decree of 28 October 2005, communicating the results of recalculation of the railway risk curves updated in line with new traffic data and infrastructure modifications carried out on 319 tunnels and 41 back-to-back tunnels in use and over 1,000 metres in length (article 11 of Ministerial decree of 25 October 2005).

Activities continued for the issue of emergency and rescue plans for tunnels that are more than 1,000 metres long. At year end, 244 of the 354 tunnels were usable.

Other work to improve safety and regularity

In 2022:

- the project to analyse and assess the risks of overcrowding on railway station platforms open to the public was rolled out;
- the project to define a scientific methodological approach to analyse the collapse of rock walls due to hydrogeological instability phenomena that could affect railway infrastructure began;
- the trialling of synthetic sleepers (virgin materials reinforced with fibre glass or steel-reinforced recycled plastics to be used as an alternative to wood sleepers) commenced.

Seismic vulnerability, hydro-geological risk and areas subject to landslides

Seismic vulnerability testing on infrastructure works along major railway lines pursuant to article 2.3 of Prime Minister's order no. 3274 of 2003 and work to improve the management of seismic risks entailed the following:

- completion of inspections on 358 bridges, in addition to the 2,065 inspected in previous years, and 12 buildings, in addition to the 63 already inspected in previous years;

- performance of general inspections on 259 bridges (382 spans) in accordance with the procedure for inspections of bridges, tunnels and other railway infrastructure works;
- completion of seismic improvement works on 140 bridges with work underway for another 51 bridges.

In addition to the mapping already carried out for the mitigation of hydro-geological risks and the prioritisation of projects to protect the railway track bed:

- 29 hydrometric monitoring stations have been installed at railway bridges with the related management platforms and activities to install another 21 systems have been started;
- studies on hydraulic compatibility checks at the bridges are being continued.

The work carried out on the alarm netting for falling rocks entailed:

- the commencement of works to install rockfall alarm systems in the Milano area;
- the start of activities to develop the systems in the Reggio Calabria area.

RESEARCH AND DEVELOPMENT

Research

The following activities were kicked off during the year:

- a study of electrolytic corrosion in the railway, consisting of the development of a system to diagnose electrolytic corrosion in direct current electric traction systems based on numerical algorithms in order to model eddy currents in electric traction systems in a variety of scenarios (e.g., single/double track, with imperfect insulation of the track to the ground, unbalancing when there is zero voltage at electric substations).
- a survey of the 5G infrastructure at railway stations to analyse applications based on 5G technology for indoor positioning at stations to support people with disabilities and to establish an architecture model for 5G infrastructure serving railway diagnostics. Electromagnetic measurement campaigns were carried out during the year on an experimental basis at the Rimini station.

The main projects commenced in previous years and continued in 2022 include:

- RFI platform project: this project began in 2018 in response to the need to standardise the control devices in the station (central computerised devices) and to significantly reduce the cost of implementing the ERTMS and the cost of plant maintenance.
- Unmanned Railway Vehicle (URV) project: created in 2018, this project is aimed at creating a self-driving railway vehicle that can detect irregularities with a potential impact on infrastructure safety on the HS lines.
- Automatic train operation (ATO) over ETCS: this project is part of the URV project but its objective is to develop an automatic train operation system that meets the Shift2Rail specifications for trains operating on the network. Trials were carried out in 2021 for the integration of Software in the Loop (SIL) and Hardware in the Loop (HIL).
- IoT sensors for railway infrastructure: this project was launched to develop smart, low-consumption sensors that can easily, reliably and unobtrusively be integrated in the network, applying avant-garde technology in the field of smart materials and optical technology. Both the Smart Rail project, to test the application of optical fibre sensors on the long welded rail to monitor deformation caused by misshaped tracks, and the Low Power ET project, to develop a technological demonstrator to monitor electrical traction infrastructure using sensors

and innovative processing techniques that draw on low-cost transducers and sensor nodes with computational capacity for structure monitoring, continued in the year.

Internationally, RFI continued to participate in the “Diagnostic Integrated Networks of Satellite and 5G (DINoS5G)” project with the aim of integrating 5G and satellite technologies to develop predictive maintenance systems.

Two patent applications were filed in 2022:

- one application relates to the development of a software system that displays the status of the computerised interlocking system (i.e., Vital light panel);
- the other relates to the remote mobile interface enabling maintenance workers to safely interact directly with the command device (computerised interlocking system or ARIS) to suspend the line or secure the area where the maintenance work will be carried out.

Technological network plan

The 2022 update to the network technology plan was drafted, revising the standards for the design and construction of currently available technological systems and products or that are being built on all lines and hubs to meet design requirements with respect to safety, capacity, regularity, faster speeds, obsolescence, technological integration and interoperability.

Technological development

In 2022, spending for investments in innovation approximated €11.6 million. The following table analyses the amount of these investments by the main operating segments:

millions of Euros

Operating segment	2022	2021	2020	2019	2018	2017
Safety technologies	9.2	9.0	14.7	20.9	21.9	28.9
Studies and tests on new parts and systems	2.2	4.7	5.1	3.1	4.0	3.7
Environmental and land protection	0.2	0.2	0.1	0.6	0.5	0.3
Other	-	-	-	-	0.8	0.3
TOTAL	11.6	13.8	19.9	24.6	27.2	33.2

Spending for technological development varies over time due to the very nature of the developments, which may enter production or because additional pilots are carried out for a limited number of locations/categories/plants.

In 2022, work began to develop a simple method of determining the risk of trains overturning along the line and evaluating the effectiveness of devices to prevent derailments.

In addition, work continued on development projects launched in previous years, including:

- monitoring after the start of testing to improve the electromagnetic compatibility of the computerised interlocking systems and multi-station central computerised systems at the Desio station (Monza-Chiasso line), with the Monza-Chiasso multi-station central computerised system placed in service as the provisional operating control line;

- development of an information system prototype named RAMSES to predict brief and intense weather events on restricted areas of the infrastructure. Using data from the rain water pluviometric network and radar data from the Italian Civil Protection Agency, this system provides useful information on events on individual sections of the railway network during weather alerts. Specifically, the product was delivered and activities have begun to engineer it and make it usable in operating processes;
- development of an acoustic motor for the acoustic simulation software (INAC 3D) for the European mapping after the preliminary design was completed. In 2022, the "IN agglomerate" and "OUT agglomerate" mapping was prepared, along with the action plan for the "IN agglomerate" map.

Technical and Monitoring Committee

In 2022, the Technical and Monitoring Committee met seven times, mainly to monitor the ongoing development of action plans and innovation categories. It also analysed eight requirement sheets and 11 research proposals during these meetings.

PERFORMANCE OF SUBSIDIARIES

Bluferries S.r.l. (wholly owned)

RFI set up this company on 4 November 2010 in accordance with Anti-Trust legislation (Law no. 287/90) through the contribution of RFI's navigation business with effect from 1 June 2012. The company has a quota capital of €20.1 million, which is entirely held by RFI. Its purpose is the transport of people, vehicles and goods by sea, the management and sale of its sea transport lines and the management of related services, the performance and provision of all port operations and services for ships at dock, the management, fitting out and lease and charter of its own and third party ships and the purchase and sale of ships and navigation and towing operations for its own and third party ships. Blufferries S.r.l. posted a profit for 2022 of €4.2 million, down 5% on the previous year. Revenue increased by €2.7 million on 2021 due to the combined effect of the €3 million rise in traffic revenue - following the growth in road transport revenue, up €2.8 million, and the rise in tank train transport, up €0.2 million - and the €0.3 million reduction in other revenue.

Operating costs rose by €2.8 million on the previous year, mainly due to the sharp increase in the price of oil, which then led to greater expenditure to procure diesel to operate water vessels.

The increase in amortisation and depreciation (+10% on 2021) is mostly due to the doubling of the depreciation rate for the Sikania ship.

Provisions (€0.4 million), which refer to the routine maintenance provision for the Trinacria and Sikania ships, were in line with the previous year.

Blu Jet S.r.l. (wholly owned)

RFI set up Blu Jet S.r.l. on 1 August 2018 as part of the organisational restructuring of the ferrying services under concession, following the change to the legislative framework introduced by Decree law no. 50 of 24 April 2017, converted with amendments by Law no. 96 of 21 June 2017.

Since 1 May 2019, this company operates, as appointed by its quotaholder RFI, the passenger transport service for the Messina-Villa San Giovanni and Messina-Reggio Calabria connections using six high-speed ships, four of which it specifically charters on a bareboat basis. Following the partial demerger of Blufferries S.r.l. (the demerged company) to Blu Jet S.r.l. (the beneficiary), with effect from 1 May 2019, the latter took over management of the connection services without interruption.

The company will continue to guarantee the fast connection between Reggio Calabria and Messina until either 30 September 2023 or when the new operator takes over the concession.

The company's profit for 2022 is approximately €164 thousand, up significantly on the previous year (€38 thousand). Revenue of €20.1 million is up 26% due to greater contributions from RFI for the operating of the two connections with high-speed ships and the increase in ticketing revenue. Operating costs of €19.1 million also increased on 2021, mainly due to the costs of diesel fuel and the increase in personnel expense linked to the higher average numbers of maritime personnel recorded during the year.

Terminali Italia S.r.l. (wholly owned)

This company was set up on 16 May 2008 to optimise the capacity to access public freight plants and to optimise their use based on the principles of fairness, transparency and non-discrimination initially provided for by Legislative

decree no. 188/2003, and later replaced by Legislative decree no. 122 of 15 July 2015. RFI holds 100% of its quota capital after the acquisition of the residual 11% in 2019, which had been held by Mercitalia Intermodal (formerly Cemat) until then. The company's business object is to manage and operate centres equipped for intermodal transport, including those serving intermodal freight terminals or similar national and international infrastructures and providing terminal services, as well as managing and operating railway terminals for national and international transport, and the construction, purchase, lease, use, repair and maintenance of means and equipment of any kind and technique, functional to intermodal transport, including on behalf of third parties.

The company reported a profit for 2022 of €2.1 million, up around 35% on the previous year thanks to the more than proportionate rise in revenue compared to that in operating costs.

Revenue jumped 17% to €52.3 million, mostly due to the increase in ISTAT rates, higher traffic volumes seen at the terminals, higher shunting volumes and greater other revenue. The start-up of the shipping container repair service, carried out at the Marzaglia hub, boosted the rise in other revenue.

The approximate €5 million increase in operating costs to €45.6 million is due to higher personnel expense (+€1.1 million), following the hiring of new personnel and new temporary staff, and the rise in other costs (+€3.9 million), which include the cost of purchasing raw materials and container repair service costs.

Tunnel Ferroviario del Brennero - Società di partecipazioni S.p.A (90.34%)

The business object of this company is to "manage the investment in Galleria di Base del Brennero BBT SE and any other entity promoting the railway tunnel at the base of the Brennero".

The main events of the year refer to equity transactions and the increase in the investment in BBT SE.

In particular, during the extraordinary meeting of 17 January 2022, the shareholders approved the thirteenth capital increase up to a maximum of €150 million, which was then carried out in two tranches in March and June. At 31 December 2021, the company's share capital totals €1,165,790,910 and consists of 1,165,790,910 shares with a nominal amount of €1 each. Following the subscription of the thirteenth capital increase, RFI's interest increased from 89.86% to the current 90.34%, which corresponds to €1,053 million. The company contributed €100 million to the joint venture BBT SE during the year and the other €50 million in January 2023 after a financial restructuring as communicated by BBT SE. These contributions were used to finance Phase III.

Tunnel Ferroviario del Brennero (TFB) shows a profit of approximately €54 thousand, a significant improvement on the previous year, thanks to the greater revenue (shareholder contributions and prior year income) and financial income accrued on excess liquidity held during the year.

Grandi Stazioni Rail S.p.A. (wholly owned)

RFI acquired this company on 13 November 2018 and its object is to redevelop, improve and manage the fourteen largest Italian railway stations as part of the comprehensive reorganisation of the station business, for the integrated development of the network stations as intermodal hubs serving mobility. For example, the company manages the lease and maintenance services on the railway station real estate complexes, as well as the areas and spaces used for ticketing offices and waiting areas, paid parking near the stations and the commercial lease of the office units.

The company's profit for 2022 is €5.9 million, up (+7%) on the previous year.

Revenue of €187.7 million increased by approximately €23.3 million on 2021 mainly due to the combined effect of greater lease revenue (+7%), greater revenue from the reimbursement of lease costs for the real estate complexes managed (+14%), greater parking revenue (+72%), lower engineering and works revenue (-13%) and greater income (+45%).

Operating costs of €165.1 million, up €19.3 million (+13%) on the previous year, include personnel expense of €13.1 million (in line with 2021) and other costs, net of €152 million. The latter increased by €18.9 million mainly as the combined effect of the rise in lease costs for the real estate complexes managed (€16.6 million), higher costs for the use of third-party assets (€1.4 million) and lower engineering and works costs (€1 million).

Amortisation and depreciation rose by roughly €1.3 million due to assets under construction that were placed in service, mainly related to GS Rail's share of the works carried out under Law no. 443/2001, development of company assets and non-routine maintenance on network stations, which were not covered by government grants.

Net impairment losses amount to €319 thousand, mostly due to the release of provisions (€337 thousand) and accruals to provisions of €656 thousand.

In relation to the first strategic infrastructures plan (Law no. 443/2001) referred to in CIPE resolution no. 121 of 21 December 2001, 10 requests were filed in 2022 for the direct disbursement of grants under Law no. 443/2001 for a total of €25.1 million. The MIT disbursed the full amount of these requests and another €0.1 million was collected for requests submitted in previous years. The total amount received in 2022 was therefore €25.2 million.

In 2022, three requests for the direct disbursement of grants totalling €2.9 million were submitted in relation to work on behalf of GS Rail for the redevelopment and accessibility at major railway stations (Law no. 232 of 11 December 2016) as per Agreement no. 1-876 of 29 April 2013. They refer to the Milano Centrale and Roma Termini stations. The MIT had disbursed the full amount of these requests at 31 December 2022 and again in this case, no requests are still pending.

With respect to the second strategic infrastructures plan, two requests were filed for the direct disbursement of grants for a total of €14.6 million for the Roma Termini and Torino Porta Nuova stations. The MIT has disbursed €9 million.

Infrarail Firenze S.r.l. (wholly owned)

Infrarail Firenze S.r.l. was set up on 11 September 2019 as resolved by RFI's board of directors on 26 June 2019 to perform all services and activities necessary to ensure the safety and protection of work sites on the Firenze hub HS railway bypass, the infrastructure work to improve traffic flow at the same hub and the preliminary and functional work for these projects, carried out on behalf of its sole quotaholder, RFI.

After discussions to define the contractual and organisational model for the works at the Firenze HS railway hub, as the sole quotaholder RFI opted to award the works through a public call for tenders in the first half of 2022. It awarded Infrarail the initial engineering works and plans to have it gradually become a construction company that will work with RFI.

The new company organisation necessitated changes to the by-laws which the quotaholders approved on 10 November 2022. They covered the change to the company's name, its business object and relocation of its registered office to Roma with effect from 15 January 2023.

Approval of the changes has meant that the company can operate throughout Italy and carry out its strategic repositioning to meet the increasing demand for complex works, especially railway infrastructure.

Infrarail will develop, oversee and maintain all the works and systems described in the legislation applicable to public calls for tenders, as well as those included in the categories of RFI qualification systems throughout Italy either directly or on a subcontracting, management, project financing, concession or sub-concession basis. It will also provide highly technical and professional services.

In 2022, Infrarail continued to carry out the activities in its remit, i.e., maintenance and monitoring of the work site, non-routine maintenance of RFI's assets, engineering activities related to the review of the executive design as well as the final work on the separate project completed at the end of May.

In addition, during the second half of the year, the company was awarded new contracts for the overhaul of the EPB TBM (earth pressure balance tunnel boring machine) and the Marti conveyer belt. It also defined new rules for work site maintenance and monitoring.

The company ended 2022 with a loss of €0.3 million, due to the drop of €14.3 million in revenue (-36% on 2021), mostly as a result of the construction activities commenced in 2021.

During the year, Infrarail incurred operating costs of €13.7 million, down 17.4% on the previous year. They mostly consisted of service costs (€9.0 million) and personnel expense (roughly €4.0 million).

TREASURY SHARES

The company does not own any treasury shares or shares of its parent either directly or through trustees or nominees, pursuant to article 2357 of the Italian Civil Code.

LITIGATION AND DISPUTES

Introduction

This section details the most significant court and criminal proceedings pending at the reporting date and which entailed developments in the year. Unless otherwise indicated, up to the date of preparation of this report, no information had arisen that would indicate that the company is exposed to contingent liabilities or losses of any amount, nor is any information known with a potentially material impact on the company's financial position, financial performance or cash flows. Furthermore, where necessary, the company has joined the criminal proceedings as a civil party.

In 2022, following criminal proceedings initiated by the public prosecutors against former or current company representatives, except for those described below, there were no definitive rulings against senior management (company officers or general managers) for any of the following:

- particularly serious crimes with wilful intent entailing substantial damage to the company or leading to the application of restrictive measures;
- fraudulent crimes covered by Legislative decree no. 231/2001;

- additional fraudulent crimes covered by Law no. 190/2012.

Litigation and significant proceedings pending with employees, third-party service providers and/or contractors, the tax authorities, regions, etc., for which, where the relevant conditions are met, accruals have been made to specific provisions for risks and charges, are detailed in the notes to the financial statements, to which reference should be made, as for information on contingent assets and liabilities.

Reference should be made to the corresponding section of the 2021 Annual Report for information on proceedings and disputes that did not change during the year.

Investigations, criminal proceedings and proceedings pursuant to Law no. 231/2001

With respect to the most significant judicial investigations and court proceedings that certain Public Prosecutor's offices have initiated against former RFI representatives, as there are no indications that the company may be exposed to significant liabilities or losses and no information is presently known with a material impact on its financial position, financial performance or cash flows, no accruals have been recognised.

Litigation pursuant to Legislative decree no. 231/2001

During the year, there were further developments to that already described in the 2021 Annual Report in criminal proceeding no. 2554/13 in the general register of crimes, which is therefore still in the hearing phase before the Foggia Court in relation to the company's administrative liability for the fatal workplace accident on 5 March 2010 at Agro di Cerignola, in which an employee of Fersalento S.r.l. died.

In the criminal proceedings no. 1430/2014 in the general register of crimes with the **Gela** Court, relating to the accident in which three RFI maintenance workers were fatally hit by regional train 12852 travelling from Gela to Caltanissetta on 17 July 2014, near km 217+728, between the Falconara and Butera stations, at the hearing on 7 October 2021, the judge delivered the ruling with the reasons filed on 26 October 2021.

Six of the eight natural persons were acquitted for not having committed the crime, including a pro tempore CEO of the company. The company's administrative liability pursuant to Legislative decree no. 231/2001 was also excluded "because the fact is not a crime". Specifically, the judge found that there were no specific elements indicating that RFI had committed the alleged administrative crime given (i) the lack of economic gain for the company as a result of the conduct of the top managers, (ii) the lack of organisation fault and (iii) the suitability of the organisational model in accordance with British Standard OHSAS 18001:2007, which effectively exempts the entity from liability.

However, the Section Head and Central Operating Manager were sentenced to two years of imprisonment (the punishment was suspended) because, for both generic and specific guilt, they failed to have the work on the track carried out while traffic was suspended. The court deemed inadmissible the joining of the criminal proceedings by an aggrieved party (ANMIL), meaning that no provisions were ordered against the company for damages.

The Caltanissetta Court of Appeals has yet to hand down its ruling on the appeal filed in 2022 against the sentence (related to the acquittal of the company under Legislative decree no. 231/2001, the pro tempore CEO, the Palermo production area manager, the Caltanissetta local area manager and the Agrigento works manager) by the Public Prosecutor and the convicted employees.

In relation to criminal proceedings no. 3651/2018 in the general register of crimes with the Milano Public Prosecutor relating to a railway accident that occurred on 25 January 2018 in **Seggiano di Pioltello**, involving the railway company Trenord S.r.l.'s regional train no. 10452 (operating the commercial service on the section between Cremona and the Milano Porta Garibaldi station), causing the death of three passengers and injuries to others, managers and employees of RFI S.p.A. have been indicted and RFI S.p.A. is also charged with administrative liability pursuant to Legislative decree no. 231/01. The notice of completion of the preliminary investigation indicated that the pro-tempore director of ANSF (now ANSFISA) and an official had also been charged. Upon the Public Prosecutor's request, the charges against Trenord S.r.l. and ANSF were dropped. The preliminary hearing before the preliminary investigation judge of the Milano Court ended on 21 June 2021 with the indictment of all the accused, including the company, for all the alleged crimes (negligence causing a train crash, negligent manslaughter, injuries due to negligence, intentional failure to take precautions to prevent occupational injuries). The first-level arguments are being heard before the Milano Court. RFI S.p.A. appeared as party that is civilly liable and about 60 people and the association FILT CGIL were admitted in the proceedings as the aggrieved parties. One of the accused, the site specialist, settled by agreeing to four years of imprisonment.

In relation to criminal proceedings no. 6305/2009 in the general register of crimes with the Public Prosecutor's Office at the Lucca Court, following the railway accident in **Viareggio** on 29 June 2009, the referral sentence on appeal was finalised on 30 June 2022 before the first section of the Firenze Court of Appeals and the reasons for the sentence were filed on 20 September 2022. The new appeal proceeding was held due to the postponement ordered by the IV criminal section of the Court of Cassation on 8 January 2021, the reasons for which were filed on 6 September 2021. With respect to the positions for which the Court of Cassation quashed the second level ruling and sent the case to the Firenze Court of Appeals for a new proceeding, the panel of judges had ruled: 1) with respect to FS Italiane S.p.A.'s pro tempore CEO (formerly RFI's CEO), there was no need to proceed in relation to the crime of manslaughter because it was extinguished due to the statute of limitations and for the crimes of negligence causing a train crash, multiple injuries due to negligence and negligence leading to fire - excluding the alleged crime of failing to order the reduction of speed of freight trains - the sentence of 5 years' imprisonment; 2) with respect to RFI's pro tempore CEO for the crime of negligence causing a train crash, excluding the alleged crime of the violation of an employer's obligation to evaluate occupational risks and the non-ordering of the reduction of speed of freight trains, the sentence of four years, two months and 20 days imprisonment; 3) with respect to RFI's CESIFER head, Trenitalia's head of the engineering, safety and system quality unit, pro tempore head of Trenitalia Cargo division and an employee in charge of checks at the Jugenthal GmbH workshop, acquittal as they had not committed the crimes. With respect to the natural persons who the Court of Cassation found guilty of the crime of negligence causing a train crash and for which it referred the case to the Firenze Court of Appeals to redetermine the sanctions, the chamber of council sentenced Trenitalia's pro tempore CEO to four years, two months and 20 days of imprisonment and Cargo Chemical S.r.l.'s CEO, also in their position as head of FS Logistica's Chemical and Environment Industry business unit to four years of imprisonment. The sentence for the accused representatives of the GATX Group and CIMA Riparazioni was also amended. The Firenze Court of Appeals ordered the FS Italiane and RFI, as civilly liable, jointly and severally with the pro tempore CEOs and the other defendants and parties already found guilty by the Court of Cassation to pay the court fees of the legitimacy ruling for Cittadinanzaattiva Onlus, the Tuscan regional authorities and the aggrieved parties as part of the proceedings. It revoked the second level rulings in favour of the Associazione Dopolavoro Ferroviario di Viareggio and Medicina

Democratica Onlus and the rulings in favour of the Viareggio municipality, which waived their right to join the proceedings as aggrieved parties. The appeals to the Court of Cassation have been formally filed within the legal terms by the defendants for which the rulings were confirmed.

After the acceptance of the extraordinary appeals for significant errors in the ruling issued by the Court of Cassation in 2021 filed by Trenitalia and Mercitalia which were found civilly liable, pursuant to article 625-bis of the Code of Criminal Procedure, which led to cancellation of the appeals of the civil case rulings in favour of the aggrieved parties Codacons and Cittadinanza Attiva Onlus, the date for the new hearing before the Firenze Court of Appeals on these two positions has yet to be set.

Criminal proceedings no. 7742/2022 in the register of crimes with the Court of Cassation following the formalisation of the extraordinary appeals made to the Court of Cassation by FS Logistica and Trenitalia, which were found civilly liable, and the legal counsel of Trenitalia's pro tempore CEO and Cargo Chemical S.p.A.'s pro tempore CEO (subsequently head of FS Logistica's Chemical and Environment Industry business unit), pursuant to article 625-bis of the Code of Criminal Procedure. These criminal proceedings were closed with the ruling rejecting the appeals made by the pro tempore CEOs of Trenitalia and Cargo Chemical S.p.A. (subsequently head of FS Logistica's Chemical and Environment Industry business unit) and admitting those made by FS Logistica and Trenitalia.

There were no developments in the proceedings before the European Court of Human Rights to which - in accordance with article 34 of the European Convention on Human Rights (ECHR) and article 47 of the Rules of the European Court of Human Rights - the legal counsel of the pro tempore CEOs of Trenitalia and FS Logistica S.p.A. had presented two individual applications for the violation of articles 6 and 7 of the ECHR related to the violation of the right to a fair trial and no punishment without law.

Criminal proceedings no. 524/2020 in the general register of crimes with the Public Prosecutor's office at the Lodi Court, related to the company's alleged administrative liability for the derailment of the HS train 9595 in **Livraga** on 6 February 2020 as a result of which two train drivers lost their lives, is still pending before the Preliminary Hearing Judge at the Lodi Court. The pro tempore CEO, managers and employees of RFI and Alstom have been charged with crimes of negligence causing a train crash, manslaughter and injuries, excluding the aggravating circumstance of violation of the rules for the prevention of accidents at work. On 3 June 2022, the Preliminary Hearing Judge, agreeing with the arguments made by the Public Prosecutor about the lack of evidence for criminal action, dismissed the charges against RFI and Alstom, previously charged with liability under Legislative decree no. 231/01, as well as some managers and employees who had initially been investigated.

Other significant criminal court proceedings

Since that reported in the 2021 Annual Report, there have been no developments in criminal proceedings no. 3034/2012 with the general register of crimes with the Rossano Public Prosecutor's office and subsequently transferred to the Castrovillari Public Prosecutor's office, relating to a fatal accident in which a train hit a car with six people inside it at the private level crossing at km 155+849 of the Rossano C.-Mirto Crosia section. At the preliminary hearing on 21 May 2021, the preliminary investigation judge declared the statute of limitations for negligence resulting in manslaughter, acquitted the holder of the concession for the railway crossing and remitted all other accused parties (including 13 employees of RFI and the holder of the keys to the private level crossing)

for judgement for the crime of negligence causing a train crash before the Castrovillari Court. When the parties appeared in the hearing, the court acknowledged the waiver of all aggrieved parties that had joined the proceedings and declared the claims for damages null and void. Arguments are being heard.

With respect to the following criminal proceedings against RFI personnel in which the company has appeared in court as a party that is civilly liable and which are not covered by insurance, there have been no changes since the 2021 Annual Report:

- criminal proceedings no. 5463/10 in the general register of crimes with the **Cagliari** Court of Appeals against two RFI managers for the train accident that took place on the Sassari-Chilivani railway section on 19 December 2009 causing the death of the train driver. On 17 November 2021, the Court of Appeals confirmed the appealed ruling, finding the two managers guilty, and therefore, the company civilly liable. As one of the convicted parties has appealed this ruling, the Cassation Court hearing was set for 18 April 2023;

- criminal proceedings no. 2899/2009 in the general register of crimes currently at the trial stage before the **Avellino** Court against, inter alia, four former FS Italiane officials charged with the crimes envisaged by and punishable under by articles 110, 589 and 590.2/3/4/5 of the Criminal Code. On 28 January 2022, the Avellino Court handed down its ruling sentencing two of the four former FS Italiane officials and two non-FS Italiane employees to ten years imprisonment as it found them guilty of the crime as per article 589.1.2.4 of the Criminal Code (death of 11 workers). As a result of this ruling, the company, found to have civil liability, was jointly and severally ordered to pay the compensation claimed by the aggrieved parties. Specifically, the court ruled that compensation was to be paid to some of the aggrieved parties, i.e., the heirs of ten deceased workers (given the failure to establish the heirs of a former worker) and four entities (the Avellino municipality, the "Lotta per la Vita" association, INAIL and the Avellino Chamber of Commerce). In addition, the company was ordered, jointly and severally with the two former FS officials, to pay a provisional sum of €50,000.00 to the heirs of the deceased workers and to reimburse the court fees incurred by them and the four entities. The reasons for the decision have not yet been filed;

-criminal proceedings no. 1243/2010 in the general register of crimes currently at the appeals stage before the **Genova** Court of Appeals after the ruling acquitting a RFI manager from the charge of manslaughter in violation of the occupational safety legislation at the La Spezia station on 24 February 2010 was appealed. On 24 May 2022, the Genova Court of Appeals confirmed the acquittal ruling challenged by the public prosecutor. The reasons for the decision have not yet been filed.

There have been no developments in the following criminal proceedings:

- criminal proceedings no. 649/17 in the general register of crimes before the Trento Court;
- criminal proceedings no. 406/2018 in the general register – criminal proceedings no. 1667/2018 in the general register currently at the preliminary hearing stage before the Judge for the Preliminary Hearing at the Matera Court;
- criminal proceedings no. 8127/2014 in the general register, related to the collapse of a wall at Ville d'Elboeuf on 5 February 2015, currently at the trial stage before the Napoli Court.

Other investigations

K2 Discount pursuant to Ministerial decree no. 44T/2000 - Roma Court ruling on the civil proceedings NRG 59994/2017, Trenitalia and Mercitalia with RFI, MIT and MEF

With its ruling of 1 March 2023, the Roma Court handed down its judgement terminating proceedings commenced by Trenitalia against RFI for the recovery of undue payments deriving from the failure to repay amounts under the K2 discount for the period from 1 December 2005 to 31 December 2007.

Ministerial decree no. 44/T of 22 March 2000 introduced the K2 discount which is a temporary reduction in the fee to use the infrastructure due to RFI by the railway companies given that the railway network, pending the completion of the technological equipment, did not allow the railway companies to adopt a driving model with a single driver.

During the hearing, which ended with the first level ruling, Mercitalia appeared to explain its independent presentation of an application for the discount for freight transport. The judge allowed RFI to implead the MIT and MEF to guarantee and indemnify it should it be ordered to pay Trenitalia and Mercitalia.

The court ruled almost entirely in favour of the plaintiffs and ordered RFI to pay €144,517,283.00, plus interest and legal fees, to Trenitalia and €91,315,687.00, plus interest and legal fees to Mercitalia. It rejected RFI's hold harmless claim against the MIT and MEF and ordered it to pay their legal fees as well.

As noted, the K2 discount was introduced by Ministerial decree no. 44/T of 22 March 2000, which was issued with CIPE resolution no. 180 of 5 November 1999, establishing the reason for the discount and its scope and requiring the tax authorities to bear the extra costs of using a second driver which was necessary due to the technological shortcomings of the network granted to RFI under concession by the state.

Therefore, the reduction in the fee was inextricably linked to specific government grants under the 2001-2005 Government Programme Contract between the MIT and RFI, which the latter transferred in the form of a discount to the railway companies that used the infrastructure.

As the public funding available under the 2001-2025 Government Programme Contract was exhausted, in December 2005, RFI stopped applying the discount and has not applied it since, given that no provision was made for it in the Budget Acts for those years or the related updates to the Government Programme Contract.

Receipt of the funding, which was a condition for the application of the K2 discount, was reiterated several times by the ministries which assumed that RFI would obviously not be able to independently provide incentives or discounts of any kind on the fee to use the railway infrastructure given that it had not been provided by funding through the Budget Acts or addenda to the Government Programme Contracts.

In July 2007, the MIT issued Ministerial decree no. 92/T in order to set out the correct application of Ministerial decree no. 44/T. It established, inter alia, that application of the K2 discount was subject to the payment of specific government grants to RFI, confirming that set out in the correspondence with both the MIT and the MEF.

Discontinuation of the discount triggered lengthy proceedings commenced firstly by a group of freight transport companies before the administrative court and subsequently by Trenitalia and Mercitalia before the civil court. Specifically, the proceedings commenced before the administrative judge challenging Ministerial decree no. 92/T of 2007 were completed with rulings no. 1107, 1108, 1109 and 1110 of 22 February 2013 handed down by the Council of State which definitively cancelled Ministerial decree no. 92/T. These rulings were followed by a compliance

proceeding which ended on 26 September 2016 with the final report of the delegate of the special commissioner finding that the four railway companies should receive the discount in the period from 1 January 2006 to 30 June 2009. It also specified the amount of the respective discounts.

When the Government Programme Contract was revised for 2015, provision was made for these discounts due to the four railway companies, confirming RFI's neutral position in applying the K2 discount.

Trenitalia commenced its legal action in 2017 because, as it had been excluded from the proceedings closed with the Council of State's rulings of 2013 and thus was unable to benefit from the special commissioner's findings, it decided to take civil action against RFI.

The above-mentioned ruling rejected all the exceptions made by RFI (namely, lack of jurisdiction of the ordinary judge, lack of interest on the part of Trenitalia to act due to its acquiescence with Ministerial decree no. 92/T, exception of statute of limitations of the claim) and, based on the court-appointed expert's report, the court accepted the requests made by the two railway companies.

RFI has examined the ruling and obtained an opinion thereon from its legal counsel.

Based on the conclusions set out above and this opinion, RFI deems that the ruling is unfair and many parts of it are incorrect. Therefore, it believes it should be appealed with a concurrent application for its suspension, also because it believes that the cost of the proceedings should be covered by the state (which is, moreover, in line with the Ministry's position clearly inferable in Ministerial decree no. 92/T). The legal counsel's opinion states that the indissoluble link between the government grant and the K2 discount is also confirmed by the reference legislative and regulatory framework and, specifically, by article 16 of Legislative decree no. 112/15 (which replaced article 15 of Legislative decree no. 188/03 in force at that time) whereby the railway infrastructure operator's accounts shall show [...] at least a balance between the revenue from fees to use the infrastructure and the government grants established in the Government Programme Contracts as per article 15 [...] and the cost of the related infrastructure, including at least the operating costs, depreciation and return on the invested capital).

This provision was clearly acknowledged by the Council of State's ruling no. 6108/2019 in another proceeding involving RFI and Trenitalia and regarding an ART decision of 2019. Such ruling clarified that the return on invested capital (i.e., the profit to be distributed to the shareholder as a return on its capital contributions) is a cost, like the operating costs and depreciation, borne by the infrastructure operator and that it should always be covered by the parties that use such infrastructure to offer their services to the market. Therefore, this "profit" should solely be used to remunerate the invested capital and ensure the infrastructure operator can break even in accordance with the above-mentioned law.

In addition to taking all the appropriate actions in court against this ruling, RFI will begin formal talks to establish a process for the recovery of the resources from the government for any amounts due.

The directors have assessed the risk of losing the case as possible but not probable. Therefore, they did not make any provision therefor in the financial statements as allowed by IAS 37 - Provisions, contingent liabilities and contingent assets. In addition, based on the above-described previous case involving the other railway companies, RFI can reasonably expect that any cost it may be required to bear as a result of the proceeding will be covered by the state.

Proceedings A436 - Arenaways S.p.A./RFI - FS

Following that indicated in the previous reports to which reference should be made for additional details, in sentence no. 1101 of 5 February 2021, the Council of State quashed part of the regional administrative court's decision, establishing that FS Italiane S.p.A. was extraneous to the events and confirming the liability of RFI and Trenitalia. The effect of this sentence was the definitive invalidity of the sanction imposed on FS Italiane S.p.A., meaning that - according to the Council of State - RFI remains individually liable only for half (i.e., €13 thousand). On 6 September 2021, RFI filed an appeal with the Court of Cassation against the Council of State sentence no. 1101/2021, as did Trenitalia. On 13 February 2023, the Court of Cassation denied the appeal, confirming the Council of State's sentence.

For completeness of information, after conclusion of the above-mentioned proceeding on the Anti-Trust Authority's measure, the Council of State's ruling no. 146 of 10 January 2022 also settled the appeal filed by Arenaway's liquidators as part of the proceedings for URSF (the office that regulates railway service) measure no. 589/10. RFI filed its appeal for the rejection of this ruling on 11 April 2022 while Trenitalia presented its appeal to the Court of Cassation on 7 July.

Regulatory measures in ART decision no. 70/2014

Reference should be made to previous reports for a more detailed description of these appeals. The first-level appeals against ART 70/2014 were all rejected and the appeals lodged by RFI, Italo-NTV, GS Rail and GS-Retail are currently pending.

The appeal lodged by Grandi Stazioni S.p.A. was rejected with decision no. 5534/2019 of the Council of State.

However, on 9 September 2019, with decision no. 6108, the Council of State allowed the appeal by RFI and, reforming the Piemonte regional administrative court's ruling, partly quashed ART decision no. 70/2014. The judge for the appeal, admitting all of RFI's arguments, expressly noted that the unit value of the infrastructure access fee indicated in the decision (€8.2 per train-km) did not completely include the remuneration of risk capital within invested capital).

Following this decision, on 31 October 2019, Italo-NTV notified RFI S.p.A. of an appeal to have Council of State ruling no. 6108/2019 revoked due to a "factual error" allegedly made by the judge in believing that the entire remuneration of invested capital was not included in the fee for the period in which ART decision no. 70/2014 was in force.

Taking the same position, even the ART joined the aforementioned proceedings, notifying RFI, on 26 November 2019, of an appeal for secondary revocation with a "motion for suspension" of the effects of the Council of State ruling for reasons that were somewhat similar to those argued by Italo-NTV S.p.A..

After RFI and the ART had lodged the "hearing notes" in the proceedings, the Council of State decided not to proceed on the application for injunction, referring to the merits.

Furthermore, on 28 November 2019, Trenitalia S.p.A. also notified RFI of a separate appeal requesting revocation of the same decision, along with an "economic report" prepared by a consulting company, which also highlights a "factual error" allegedly made by the judge.

On 12 November 2020, the hearing was held for arguments in the appeals requesting revocation lodged by Italo-NTV, Trenitalia and the Art. With decision no. 1262 of 12 February 2021, after a meeting, the Council of State

rejected the aforesaid appeals requesting revocation of decision no. 6108/19. In particular, the judge agreed with RFI's arguments and declared all the reasons for revocation inadmissible.

With decision no. 39 of 25 March 2021, the ART therefore began the regulatory proceedings, with the calling of a consultation to redetermine the fee to access the HS/HC railway infrastructure in the period from 6 November 2014 to 31 December 2015, setting 30 April 2021 as the deadline for the consultation. On 17 June 2021, decision no. 88/2021 was published, in which the ART concluded the above proceedings, setting the criteria for the redetermination of the HS/HC railway infrastructure access fee for 6 November 2014 to 31 December 2015. Italo-NTV appealed against this decision in an extraordinary petition to the President of the Italian Republic on 15 October 2021, which was subsequently referred to the Piemonte regional administrative court following the challenges notified by RFI S.p.A. and the ART.

On 23 December 2019, the ART filed an appeal before the Joint Sections of the Court of Cassation on the Council of State's ruling no. 6108/2019 on the alleged grounds that it went beyond the outer bounds of the ART's scope of activities through the exercise of informed decision powers not established by law. Trenitalia and Italo-NTV joined ART's appeal by filing secondary appeals. With decision no. 88/21, the ART expressly established that compliance with the Council of State's ruling no. 6108/2019 does not entail acquiescence and that "if the Court of Cassation quashes the decision, the ART's executive measure would also lapse along with its economic effects produced until that time. On 15 November 2021, the Public Prosecutor of the Court of Cassation submitted its conclusions, asking the court to reject the appeals by the ART, Italo-NTV and Trenitalia, claiming they were inadmissible and in any case groundless.

Following the hearing held on 14 December 2021, with order no. 5627 of 21 February 2022, the court declared inadmissible the ART's appeal, the secondary appeal filed by Trenitalia and the counter appeal filed by NTV.

In particular, the Court of Cassation highlighted how the reason for the ART's appeal translated into "a critique of the Council of State's decision-making process" that, even if it were to lead to erroneous conclusions, this would have resulted in an error in iudicando, which was not disputable before the court, where the checks of the Joint Sections must be exclusively the "verification that the outer bounds of jurisdiction are respected and does not extend to alleged violations of the substantial or pleading law, both of which relate to the way in which special jurisdiction is exercised".

Therefore, in the court's opinion, no legitimate replacement of jurisdictional power was found in the specific case, especially considering the types of activities carried out by the independent authorities, which entail high levels of technical discretion in the exercise of their functions.

The principle enshrined in the Council of State ruling no. 6108/2019 was therefore confirmed, along with the economic effects of the application of the principles of ART decision no. 88/2021.

The appeal by Italo-NTV is still pending before the Council of State against the regional administrative court's decision no. 1239/2017, which rejected its original appeal against ART decision no. 70/14. In this case, a preliminary order was recently issued in which an assessment was ordered on the amount of the infrastructure access fee. After the chamber of council hearing held on 16 December 2021, the Council of State appointed the Director of the Corporate Engineering Department at the Tor Vergata University of Roma, with the power to appoint another instructor in the department. Information is yet to be received on when the assessment will begin. On 14 July 2022, the Council of State noted that the assessment had not been performed and set a new date for 2 February 2023.

After the hearing of 2 February 2023, as the assessor had not completed the assignment, the Council of State revoked order no. 5535/2019 (with which it had ordered the assessment) and ordered, in lieu thereof, a court-appointed expert report.

ART decision no. 96/2015 "Criteria for determination of charges for access and use of the railway infrastructure" – Extraordinary appeal with the President of the Italian Republic

While reference should be made to previous reports for more information, on 7 January 2020, with rulings nos. 19, 23 and 25, the Piemonte regional administrative court settled the appeals filed by the international railway companies OBB, SNCF and DB Bahn against ART decisions nos. 19/23, 25/2016 and 75/2016 (and subsequent decisions).

Specifically, the regional administrative court denied the grounds for the appeal to challenge the determination of component A) of the fee (for the calculation of the operator's direct costs) and the ART's jurisdiction for determining component B) of the fee (for the mark-ups). The administrative judge found the challenges to be justified and declared there to be a weakness in the preliminary analysis of the ART's decision to apply a higher fee (in component B) for the international open access networks. In substance, it is not clear on what preliminary basis and for what reasons the ART assumed that international open access could generally bear a mark-up over the national fee.

Consequently, the ART ordered the start of another round of regulatory proceedings (decision no. 28 of 30 January 2020), to gather the necessary information to justify the application of a surcharge for the international open access segment. With **decision no. 175** of 16 December 2021, the ART completed these proceedings, establishing that the difference between component B) of the fee that RFI had set for the international open access segment and that for the national open access basic segment was unjustified. RFI was therefore ordered to meet a series of requirements:

- recalculate the non-MAP fee for 2018-2021, setting the same rate for B1 component of such fee, applied to passenger railway transport in the international open access market segment, as that for the same component of the national open access basic market segment;
- following this recalculation, apply the consequent adjustments to the parties to commercial relationships affected by the Piemonte regional administrative court rulings nos. 19, 23 and 25 of 7 January 2020, agreeing the related implementation methods with the eligible parties.

In addition, for the non-MAP fee, the ART decided that, as from 1 January 2022, every train in the international open access segment operating on sections of the network with speeds of over 250 km/h must be categorised in the open access premium segment for the calculation of component B of the fee, whereas all other trains must be classified in the open access basic segment.

As for the need to ensure that the infrastructure operator's accounts are balanced, pursuant to article 16 of Legislative decree no. 112/2015, under normal operating conditions and over a reasonable period of time not exceeding five years, RFI was required to recognise a specific figurative caption equal to the difference in revenue arising from the application of the above adjustments, as well as the revision of the fees, to be allocated to component B of the unit fee that will be applied to passenger railway transport services operating under the open access market regime on the entire national railway network in the 2023-2027 regulatory period, based on overall traffic volumes forecast for these transport services in the same period. The railway companies Trenitalia S.p.A. and Italo-Nuovo Trasporto Viaggiatori S.p.A. appealed against decision no. 175/2021.

Appeal of Trenitalia and other freight companies against ART decision no. 43/2019

With decision no. 43/2019 published on 18 April 2019, the ART concluded the proceedings commenced with decision no. 138/2017 for compliance with the Piemonte regional administrative court's rulings nos. 1097 and 1098 of 2017 concerning the revision of RFI's tariff system.

Decision no. 43/2019 was appealed before the Piemonte regional administrative court by a group of freight railway companies (notified to RFI on 17 June 2019) and by Trenitalia with an extraordinary appeal before the Head of State (notified to RFI on 14 June 2019), subsequently transferred to the Piemonte regional administrative court following the ART's challenge.

As for the appeal lodged by the freight railway companies, with an order issued on 29 June 2021, the Piemonte regional administrative court ordered an assessment and, with another order issued on 27 January 2022, appointed the Engineering Department of the University of Parma as the assessor with which "there are no conflicts of interest arising from professional engagements in place between the parties in question". The assessment began on 30 May 2022. The date for the public hearing set for 13 December 2022 has been moved to 4 July 2023.

With ruling no. 1136 of 6 December 2021, the Piemonte regional administrative court dismissed Trenitalia's appeal after the hearing held on 8 June 2021 as it was without grounds. On 4 March 2022, Trenitalia appealed against this ruling before the Council of State.

ART decision no. 20/2022 of 9 February 2022

With decision no. 20, the ART commenced proceedings against Trenitalia S.p.A. and RFI jointly, in order to potentially take disciplinary action, following their non-compliance with the ART's measures regarding passengers' rights and, in particular, the cancellation of a train and the notification of adequate information on the availability of alternative means for continuing the journey (measures 3.4 and 4.5 of annex A to decision no. 106/2018).

RFI formulated a set of commitments pursuant to article 8 of the Regulation for the performance of ART sanction proceedings in order to remedy the violations alleged in the decision and rapidly and successfully conclude the same proceedings. Specifically, it committed to designing an internal operating procedure to provide its employees involved in the activities with an impact on public information with a job qualification, i.e., a certification of their attendance at a dedicated training course, their passing of the related exam and regular refresher courses. With decision no. 82 of 19 May 2022, the ART found these commitments to be acceptable and published them on its website so the market test could be performed. As no feedback from the market was received, the ART approved RFI's proposal of commitments with its decision no. 106/2022 and dismissed the proceedings without any assessed violations.

ART decision no. 21/2022 of 9 February 2022

On 9 February 2022, the ART notified RFI of the commencement of an individual procedure for the possible adoption of an order to redetermine the methodology applied and, consequently, for the application of a new methodology, for the allocations pursuant to article 73.4 of Legislative decree no. 73 of 25 May 2021, converted, with amendments, by Law no. 106 of 23 July 2021.

During the preliminary phase of the procedure, RFI noted that the forward-looking figures, available when the methodology was selected for allocating the fee discount, showed that the discount was substantially the same for the two market segments covered by Decree law no. 73/2001.

As the ART's dedicated offices did not agree with RFI's reasoning, they issued their preliminary findings on 31 May 2022 asking the authority's board to adopt a measure ordering the company to redetermine the fee discount methodology.

The ART found that the methodology applied by RFI to allocate the fee discount was unsuitable in its decision no. 113/2022 and ordered the company to adopt a new allocation methodology. RFI has complied with this decision informing both the railway companies and the ART of the new allocation of the fee discount.

ART decision no. 147/2022

On 8 September 2022, the ART commenced sanction proceedings against RFI for its alleged violation of article 23.3 of Legislative decree no. 112/2015 as regards the limits on the assignment of framework capacity as per paragraph 4.4.2.1 of the 2023 Network Statement. Specifically, the Authority alleged that RFI had agreed master agreements for capacity above the 85% threshold of total capacity for each section and time slot provided for in the Network Statement. On 7 November 2022, RFI presented its proposal of commitments to settle the proceedings without identifying an infringement. The ART found such proposed commitments to be inadmissible in its decision no. 249 of 22 November 2022 and ordered that the proceedings be continued. Upon their conclusion, should the ART find that RFI has violated the rules, it may be required to pay an administrative fine of up to 1% of its revenue recognised in the year before the proceedings commenced (which will not however exceed €1,000,000.00).

Court of Cassation order no. 32621/2022 on the appeal filed by ARERA et al. v. RFI against the Council of State's decision no. 03348/2019 concerning the appeal against resolution no. 641/2013

On 16 May 2019, with decision no. 3348/2019, the Council of State admitted RFI's appeal against the Lombardiaregional administrative court's ruling no. 1598/2014 concerning the request to cancel ARERA resolution no. 641/2013/R/COM of 27 December 2013 containing the "1 January 2014 update of the tariff components to cover general charges and other components of the electricity and gas sector", as well as other deeds and resolutions.

The case called into question the process used to revise the criteria for the allocation of the general electrical system charges, which began with resolution no. 168/2013/R/EEL. In previous resolutions, ARERA had not classified RFI and the railway companies as "energy-intensive companies". However, in the resolution subject to the appeal, the various tariff components were calculated in such a way that energy for traction - which RFI purchased for the railway companies - was subject not only to charges for the new Ae tariff component (to cover the new subsidies for general electricity system charges for high-energy consumption companies) but also to all the other A tariff components applicable to monthly consumption over 12 GWh/month.

In the first-level case, the regional administrative court could not admit the appeal because it was filed past the deadline.

The Council of State admitted the appeal and decided in RFI's and the railway companies' favour on the grounds that, although they do not operate in the manufacturing sector, energy is not a cost that can be compressed, and, on the contrary, is the only driving element for trains.

On this basis, the Council of State emphasised that the exclusion of RFI and the railway companies from the subsidies - which were granted to proper "energy-intensive" companies in the resolutions against which the companies appealed - could not be justified by legislation and conflicted with the principles of the relevant directive (i.e., directive no. 2003/96/EC).

ARERA appealed the Council of State's decision for jurisdictional reasons before the Court of Cassation. On 4 November 2022, this Court published order no. 32621/2022 settling the dispute, rejecting ARERA's appeal and confirming the Council of State's decision no. 3348/2019.

RFI is assessing the effects of its inclusion in the register of energy-intensive companies before it asks for the order to be executed.

Appeal to the Lombardia regional administrative court (register of crimes 1366/2022) - RFI v. ARERA for the cancellation of the note of 11 May 2022 concerning the "Special tariff regime in favour of RFI - application for supply for uses other than traction"

On 11 July 2022, RFI filed an appeal with the Lombardia regional administrative court against ARERA and Cassa per i Servizi Energetici e Ambientali ("CSEA") challenging ARERA's note of 11 May 2022 (referred to above) and the authority's report no. 212/2022/I/Com of 17 May 2022 detailing the use of resources earmarked to mitigate the effects of the price rises in the electricity and natural gas sectors.

Specifically, ARERA had stated in its note of 11 May 2022 addressed to e-Distribuzione and CESA and copied to RFI S.p.A. and FS Italiane S.p.A. that, pursuant to article 29.1 of Decree law no. 91/2014 (amended by Law no. 167/17), the special tariff regime, for which RFI is eligible under Presidential decree no. 730/1963, is limited to energy for traction and, hence, energy for "uses other than traction" is excluded from this regime.

Given that the benefits of the special tariff regime comprise: a) the offset component, and b) application of reduced general system charges, the authority ordered that:

- the right to the offset component for energy for uses other than traction is no longer valid after 1 January 2015;
- all the withdrawal points for energy for uses other than traction require full payment of the general system charges starting from 1 January 2018.

A date for the appeal hearing has yet to be set.

In the meantime, on 28 December 2022, CSEA independently offset the amount paid to RFI for the 2015-2019 period for uses other than traction in the payment for the offset for energy for traction. In February 2023, RFI filed its precautionary appeal as part of the existing proceedings as well as another appeal for additional reasons against CSEA.

There have been no substantial changes since the 2021 Annual Report in relation to the following proceedings:

- Anti-Trust Authority proceedings no. A/519 - Veneto region;
- RFI's appeal before the Piemonte regional administrative court against decision no. 33/2016 concluding the sanction proceedings as per decision no. 64/2015.

REMUNERATION OF DIRECTORS THAT HAVE BEEN ASSIGNED POWERS

The remuneration of the chairwoman of the board of directors and of the CEO are established by the board of directors in compliance with the "Directive regarding the adoption of the criteria and methods for the appointment of members of the board of directors and the remuneration policies for senior managers of companies directly or indirectly controlled by the MEF" dated 24 June 2013.

During the shareholders' meeting of 29 December 2020, RFI's shareholders appointed the new members of the board of directors for the 2020-2022 three-year period and determined their fees, as follows:

RFI		
Chairwoman of the board of directors		Annual fees
Fixed remuneration:		80,000
CEO and general director		Annual fees
Fixed remuneration:	fee for position as CEO pursuant to article 2389.3 of the Italian Civil Code	65,000
Fixed remuneration:	salary as general director	330,000
Variable remuneration:	bonus as general director	170,000

DISCLOSURES REQUIRED BY ARTICLE 2497-TER

RFI adopted the FS Italiane group's regulation, which regulates management and coordination of the group, with effect from 1 June 2022.

According to article 2.5 of said regulation, among other things, RFI takes decisions in accordance with management and coordination deeds, without prejudice to (i) its duty to previously assess compliance with the applicable regulations and the principles of proper corporate and business administration and that the decision is in the interests of the company taking said decision; and (ii) its legal obligations. Article 2.6 of this regulation also establishes that, if among other things, RFI does not agree with the management and coordination deed, it may promptly send a reasoned notice in writing to the company that formulated the deed.

During the year, the company's board of directors adopted the following decisions in accordance with management and coordination deeds of its sole shareholder FS Italiane S.p.A.:

- approval of the proposed partial demerger of RFI to FS Security S.p.A.;
- approval of the board of directors' regulation;
- approval of the FS Italiane group's anti-corruption policy.

RFI also made additional decisions in accordance with other management and coordination deeds of its sole shareholder FS Italiane S.p.A. in order to develop the company's organisational and procedural structure in line with the group's strategies.

RISK FACTORS

At the preparation date of this report, no particular risks and uncertainties are foreseen that could have a material impact on the company's financial position, results of operations and cash flows other than those mentioned in the notes, to which reference should be made, with regard to financial risk management (credit, liquidity, market, currency and interest rate risks).

Risk management

With respect to the company's project risk management, after completing the trial phase commenced in 2021, in 2022, a risk analysis began on the main projects covered by the NRRP on a pilot basis and according to a plan to analyse the infrastructure projects presenting a whole-life cost of €300 million or more.

During the year, the RFI Committee for the National Recovery and Resilience Plan and Commission Works, set up in 2021, continued to guarantee constant oversight with respect to all cross-sector aspects of the Investment Plan, monitoring progress and implementation and ensuring constant alignment with the parent company.

The 2022 risk control self assessment showed that overall the control system is adequate and measures are being taken to strengthen certain areas on the basis of the half-yearly assessment.

The risk management department was also engaged in strategic planning to identify and monitor the main risks that could affect the group's strategic plan.

It also updated the strategic risk analysis and defined mitigation actions that have either already been rolled out or will be.

The risk analysis findings are reported below, focusing on the aspects with the most external materiality.

Business risks

RFI operates in a challenging context presenting profound transformation and uncertainty in addition to the other, already well-known characteristics of this sector, generating new complexities. The current geopolitical crisis triggered by the Russia-Ukraine war and its fall-out on the world economy and the supply chain, which was already hard-hit by the pandemic, the vast financial resources made available under the NRRP, the regulatory framework and the opening of the railway market to competition are only a few of these aspects. Another one is the persistent imbalance between public and private transport. Then there are the increasingly significant effects of climate change and the fragility of the land, which require an increasingly resilient and monitored railway infrastructure. These are the action areas to focus on in order to optimise the railway infrastructure operator's business.

Consequently, even the company's risks and opportunities have evolved and differ according to the various business areas and initiatives. This entails the need to fine-tune strategic, financial and operational planning processes based on the analysis of ad hoc scenarios. In order to enable the gradual implementation of plans and programmes, the company has implemented systems for governing each initiative and investment rolled out, which includes the establishment of committees, task forces and ad hoc work groups for the most significant projects, with structured periodic monitoring of their progress.

At this particularly delicate time, RFI seeks to play an active role in the country's recovery, contributing to economic and social development through investment programmes and work to improve infrastructural and operational resilience. Specifically, the company strives to be a key player in the mobility system's green and digital transitions,

prioritising the mobility needs of people and logistics, the achievement of the SDGs and the creation of the Single European Railway Area.

Regulatory and compliance risks

The company operates in highly regulated sectors where changes in regulatory rules, requirements and obligations can impact the performance of operations and forecast results. Foremost among the company's external sources of uncertainty is, in general, the risk of the timely availability of financial resources (under GPCs, European funding, including the NRRP, etc.), which could impact business plans and the financial statements.

In general, in the management of relationships and information flows with government bodies and regulators (institutions, independent sector authorities, etc.), including in the event of potential disputes, the company is always open to holding meetings and discussions with such parties, especially when they are meaningful, organised on the basis of transparency, cooperation and pro-activeness.

Nevertheless, given the complexity of its business and the many different activities performed, the company is exposed to the risks of non-compliance due, in general, to the potential failure to comply with legislation or regulations, with consequent sanctions, financial losses or damage to its reputation.

To uphold these principles, the company monitors developments in legislation and regulations, including through permanent work groups and organisational safeguards. It also has specific structures to conduct audits on compliance with internal and external regulations and offers training to personnel on the most important compliance issues.

Specifically, in the scope of the single anti-corruption framework, RFI's anti-bribery & corruption (ABC) system provides for cross-disciplinary control principles and a set of specific prevention tools consisting of standards of conduct and indicators of potential irregularities, for knowledgeable, responsible decision-making processes based on integrity, fairness and lawfulness. To help raise awareness of these values at all levels, the main action areas under the ABC system include ongoing training and communication activities.

The group compliance model has also been defined as part of the strengthening of the internal control and risk system. This model further prevents compliance risk, i.e., the risk of violating external and internal regulations with repercussions on the group's reputation.

In addition, during the year, RFI implemented the FS Italiane Group's Anti-trust policy, adopting the anti-trust compliance tools of RFI and its subsidiaries. These tools represent an additional part of the company's set of rules in place to guarantee to stakeholders that RFI carries out its business in line with the defined objectives and is aware of the risks that could affect achievement of such objectives and its value and reputation.

To address aspects related to the management of personal data protection, activities continued in 2022 to ensure compliance with the requirements of Regulation (EU) 2016/679 and the group's Data Protection Framework. The company also continued its training courses, tailored specifically for the Data Managers and their assistants (both at the company and its subsidiaries).

Operational risks

Infrastructure investments in the railway system consist of complex projects requiring significant financial resources and a structured organisational and project management system that RFI has in place, including through other group companies. There are many different events that could impact the completion of work within the scheduled time/costs and affect the quality, efficiency and availability of the railway infrastructure, which could have potential adverse effects on company results. In general, these events relate to risks already identified in the previous sections such as, for example, potential changes in the legal or regulatory context, lengthy authorisation processes for projects with the Italian Ministries/Bodies, inefficient personnel management (inappropriate size and specific skills), inadequate IT support tools, difficulties coordinating and monitoring investment projects, technical changes in programmes and technical/organisational weakness on the part of contractors/general contractors (also due to financial difficulties or defaults) and/or technical parties, possible increase in corruption and criminal infiltration given the huge resources made available by the NRRP, and potential extreme natural events that could cause damage to company assets and cause discontinuity in operational processes.

To mitigate these risks, the company implements management and control procedures to constantly monitor the physical, economic and financial performance of infrastructural work and to start mechanisms to define improvement or corrective action. In this regard, specific contractual, organisational and governance actions are in place and are still being implemented, aimed at bolstering supervision and consistency with the relevant strategies and coordination of investment projects by RFI as the customer. Moreover, a wide-ranging project is continuing in order to innovate the investment management procedures by establishing new guidelines and optimising the IT tools used for operational management and, more generally, to support the entire life-cycle asset management model and facilitate reporting flows to external stakeholders.

Furthermore, the ad hoc organisational safeguards (task forces and committees), established in 2021, were kept in place to coordinate and monitor the NRRP projects and a long-term plan is in place to hire new personnel and train them to support the investments and maintenance.

Railway infrastructure is also sensitive to interruptions/potential issues due to faults in plant and technologies, serious natural events and acts of vandalism that could affect the provision of continuous train services in accordance with the expected quality standards. To prevent such risks, not only does the company have state-of-the-art security, control and monitoring systems, but it also carries out, with the increasingly important support of technology, specific maintenance cycles on the network and adopts procedures to manage irregularities and emergencies, and specific contingency plans, with a constant focus on updating the public and supplying accessory services to customers. An extensive climate change response project is in progress (mitigation of hydro-geological and seismic risks) to optimise and improve the resilience of infrastructure. Furthermore, taking a continuous improvement approach, RFI is revising the planning/programming/reprogramming process for infrastructure maintenance and diagnostics and the IT tool that supports it.

In order to improve service quality, the Punctuality Committee has continued its activities. It is responsible for monitoring and overseeing the real punctuality and the performance of all the parties involved and identifying short, medium and long-term actions in terms of traffic management, commercial products and technical scenario, the maintenance model, the planning and performance of investments, and standardisations to resolve repetitive system faults.

RFI has also set up an interdepartmental work group to reorganise the central control stations. This group's remit also includes the oversight and monitoring of the progress of locally-based projects. It also launched a project to extend the multi-station command and control system throughout the entire network and to develop a software to optimise train traffic management.

It is also rolling out actions to make train traffic management smoother and expand traffic capacity at large urban hubs to grow the network's capacity, performance and accessibility. The company has assembled a sizeable investment envelope to renew and upgrade technology throughout the network in order to speed up the digital transition and automate systems and processes making it more efficient as well as compliant with sustainability principles. In addition, the company is also studying advanced diagnostics and predictive maintenance projects.

Through its works, RFI contributes to progress towards the SDG of the 2030 Agenda and, especially, SDG 9 Build resilient infrastructure, promote sustainable industrialization and foster innovation with follow-on effects for the quality, reliability, sustainability and resilience of railway infrastructure.

Procurement risks

In general, the company has centralised procurement management and, for railway system services and specialist skills, it uses specific vetting provider systems and lists of professionals with excellent track records. To ensure the increasingly efficient use of government resources, RFI is continuing the project to redesign the procurement process based on an analytical model to determine the ideal price of procurement, while also making the process faster, simpler, traceable and paperless. Specifically, the aims of this project are to minimise the time needed to complete the procurement process (from the definition of the specific materials to accounting) and to ensure continuity at work sites. Furthermore, in the current macroeconomic context and the challenges of the NRRP, another aim is to overcome difficulties in procuring materials by anticipating procurement needs and improving warehouse management both centrally and locally.

In response to changes in the prices of goods due to market fluctuations, through its specialist units, the company monitors the trends in prices of key commodities for its business and the applicable legislation. In addition, the company is assessing whether to introduce procurement management policies to mitigate the risk of rising prices for materials. It will take all necessary measures to protect its interests and ensure supply continuity.

The current and potential effects of the risks related to the present geopolitical situation have a significant impact on the supply chain, also given the sanctions imposed on Russia by Europe, such as the spike in prices of key commodities, like gas (for which both Ukraine and Russia are the major suppliers) and steel. This has repercussions in terms of difficulties in sourcing supplies and slows down operating processes, pushes up inflation and makes it necessary to revise the estimates presented in bids. The situation is exacerbated by the blocks on imports and exports.

With respect to the electricity sector, the company constantly monitors the legislative and regulatory context. As noted, due partly to the war between Russia and Ukraine, prices on the energy markets (electricity and gas) were incredibly high and extremely volatile in 2022, continuing the trend already seen in the last months of 2021. The effects of these price increases on electrical energy to power the 3-kV network were mostly offset by the special tariff regime.

To limit possible situations in which the company relies on builders/suppliers and to reinforce its railway know-how, the company has begun the progressive in-sourcing of critical maintenance processes and processes for the construction of infrastructure, plant technological operation and production of railway components and has defined, for strategic supplies, emergency stock levels, how to reconstitute these stocks and supplier diversification policies. In addition to this, there were initiatives designed to identify a general risk assessment model for RFI suppliers to help make the best choices for materials (including strategic) supplies, including the new vendor rating model, as well as specific actions to benefit sustainability by extending the inclusion of Corporate Social Responsibility (CSR) performance scoring to all technical/economic tenders called by RFI. Specific initiatives are also being developed to extend the protocols for the sustainable design of infrastructure and to comply with the DNSH (Do No Significant Harm) principle as well as the integration of the new ESG KPIs in the supply chain for the enhancement of the complete chain.

ICT (Information and Communication Technology) risks

The company operates using IT systems/platforms to coordinate and plan activities with respect to train traffic management and the related services, the sale of train paths, procurement management, maintenance and investments, to monitor stocks and for a number of other activities, including the management of accounting processes. The hardware and software that is used could be damaged by human errors, natural disasters, power outages or other events. Unexpected problems in structures, system failures or cyber attacks could influence service quality and cause interruptions and slowdowns and/or block company activities with resulting financial impacts and on its reputation.

In order to ensure the continuous availability, integrity and confidentiality of IT data, RFI is equipped with prevention and protection systems (back-up procedures, authentication and user profiling procedures, firewalls, etc.) and has also strengthened and expanded its security (via vulnerability checks, penetration tests, etc.) and business continuity/disaster recovery processes, particularly for business-critical systems.

An extensive, complex project is in progress to equip the FS Italiane group with a management and control model that classifies information based on its degree of confidentiality in order to protect, in particular, confidential and strictly confidential information, from possible breaches that could cause significant damage as a result of the improper, accidental or intentional use of such information (e.g., potential economic losses, the deterioration or interruption of services, impacts on people and things, loss of competitiveness, fines, damage to the group's image and reputation or to relationships with stakeholders, etc.).

During the year, the parent rolled out the new Technology, Innovation & Digital Governance Model, which defines roles, macro-remits and remits at group level, division head level and group company level as well as the related intersecting Technology, Innovation & Digital System.

Risks of the spread of infectious diseases

The global spread of a disease, creating epidemiological or pandemic emergencies that affect local populations (such as Covid-19) may cause, in addition to a deterioration of macroeconomic conditions, slowdowns in business activity due to restrictions imposed by national and foreign authorities, the unavailability of personnel, difficulties

faced by customers in using collective mobility services and disruptions in the supply chain, which may have adverse effects on the company's results.

The company has adopted processes and procedures that support the identification, management and monitoring of events with potential impacts on its resources and business. These processes are meant to optimise the timeliness and efficiency of the actions taken in response to the emergency and improve the company's operational and management resilience in the long term.

OUTLOOK

The macroeconomic scenario will continue to be affected by the highly unstable and uncertain global geopolitical situation, mostly caused by the Russia-Ukraine war, which may continue to impact the availability and prices of commodities, significantly hold back world trade and diminish confidence.

According to the European Commission's most recent estimates, GDP is expected to shrink by 0.8% after growing nearly 4% in 2022. It should pick up in the following two years.

Consumer inflation, which soared to almost 9% in 2022, is forecast to decrease to 6.1% in 2023 and more sharply after that to 2.6% in 2025 (source: European Commission).

Electricity prices have gradually started to fall after the peaks of 2022 thanks to both less consumption and the price cap imposed at EU level, with an expected single national price of €232/MWh in 2023 (roughly €300/MWh in 2022). Natural gas prices are expected to follow suit.

Given this background, the company has identified an action plan to contain energy consumption in the short and medium to long-term by regulating the power supply voltage of the electric traction lines, defining an efficient driving support system, as well as installing LED lights on shelters, underpasses and light towers at train stations. The plan also encompasses the installation of accumulation systems to recoup braking and transformation energy and electrical heating systems for the self-regulating switches.

With respect to transport and developments in mobility demand, passenger traffic figures are still well below the pre-pandemic levels, despite the strong recovery in all transport modes (rail, road, air and sea) but a return to 2019 levels is possible after 2023.

On the other hand, the freight transport sector has shown itself to be more resilient, remaining constantly above the pre-Covid levels in the past three years.

With respect to the current regulatory framework of standards and criteria used to calculate the fees to access and use railway infrastructure, the ART has commenced a round table with resolution no. 11/2023 of 27 January 2023 to review such criteria.

Upon conclusion of the public procedure, the regulator will adopt its definitive measure revising the standards and criteria set out in resolution no. 96/2015 and formulating the new proposed fees to be approved by it before 30 June 2023. The procedure will be completed by the end of November when the ART approves the fees for the new regulatory period.

The company has confirmed its commitment to the strategies set out in its business plan, which is being updated since its approval last March, in line with the group's vision to facilitate a system of resilient infrastructure, sustainable mobility and integrated logistics and to create value for the country. The group is at the heart of the

mobility ecosystem with a plan to increase passenger transport by 30% and to double freight transport (for distances of over 300 km), thus contributing to Italy's economic development while focusing on the environment by pursuing its zero emissions objective.

The group's vision continues to be hinged on four fundamental pillars, identified as the four divisions and two enablers, Digital infrastructure and innovation and Valuing and caring for people.

Specifically, the Infrastructure division, comprising RFI (division head), Anas, Italferr and FSE, has the remit of building infrastructure¹, defining and specialising roles of the different infrastructure (e.g., railways for long distance and mass transit, roads for capillarity and feeding), maximising industrial rail-road synergies and providing the country with integrated, resilient and sustainable infrastructure. The strategies for the new Infrastructure division include:

- improving the current service levels of infrastructure, focusing on the core business and quality management;
- increasing Italy's transport infrastructure, integrating the railway network with other infrastructure and urban centres;
- achieving investments in infrastructure within the established timeline;
- accelerating the Group's and Country's ecological transition;
- guaranteeing infrastructure safety and resilience in an increasingly challenging scenario;
- focusing on driving innovation, seizing opportunities created by new technologies for maintenance and services.

A key project for the roll-out of the Infrastructure division is the initiative launched by RFI and the other division companies to maximise their **industrial and operating synergies**. This entails their strong commitment to identifying and achieving these synergies in their internal processes regulating infrastructure availability, procurement, investments, commercial activities and railway traffic. They will achieve this process optimisation partly by adopting (internal and external) best practices.

The introduction of procedures to accelerate synergies will play a very important part in terms of:

- **timing**: harmonisation of processes at division level to shorten lead times (e.g., tender assignment times); implementation of a common management method for the authorisation and roll-out of investments (e.g., handling interference, local authorities, etc.);
- **quality**: promotion of Italferr as a centre of excellence in charge of the division's design and works management; integrated rail-road planning to prioritise investments; intelligent and integrated monitoring of infrastructure; and enhancing the best practices already deployed by the division companies;
- **efficiency**: consolidation of common purchases (after analysing overlaps in the supply chain and existing regulatory constraints); tariff standardisation (perimeter and value), including by adjusting the "should cost" method and integrating shared maintenance activities.

Another key issue is the digital transformation of the division's infrastructure, to be achieved with the "Connected infrastructure" project, designed to achieve pervasive monitoring of the railway and road networks using sensors (installation of sensors and IoT technologies to monitor bridges and tunnels, integration of the hardware network

¹ With a particular emphasis on investments under the NRRP.

to send field data, development of big data and advanced analytics models to analyse data and for monitoring purposes, BIM modelling and development of digital twins, again for monitoring purposes) and the creation of a widespread connected infrastructure (rail&road gigabit project) covering the entire country using dark optical fibre and sites to facilitate optimised radio coverage by public operators on the national railway infrastructure.

One of the company's main challenges is continuing the NRRP investment programme which will significantly speed up investments in Italy, assisted by the reforms to accelerate the approval of GPCs and large works.

The company must develop its business in accordance with the most advanced environmental and social sustainability methods and criteria and in line with its stakeholders' requirements and expectations to maximise the environmental and social impact of its investments in a context where sustainability is central to the group's vision in order to create value for the mobility system and the country over the long term. To achieve this and accelerate the ESG evolution of all the industrial processes connected to management of the national railway infrastructure, RFI's sustainability committee has drawn up a strategic action map for its ESG transition hinging on ten strategic action lines covering all the network management macro processes (development, operation, maintenance, divestment/reuse). Specifically, in the definition of the appropriate actions to achieve the company's strategic objectives, it has devoted particular importance to cross-sectional initiatives closely integrated with the projects connected to the strategic propositions, aimed at boosting and accelerating integration and development of best sustainability practices for investments and, more generally, all internal processes in order to maximise RFI's contribution to progress towards the FS Italiane group's long-term goals and the SDGs.

Considering the public funding context, RFI's railway investment plan is dependent on the public funds supporting railway transport development. The financial resources included in the GPC-S and GPC-I form the basis for the detailed planning of the works already commenced/financed, which are expected to give the greatest returns in the short-term in terms of performance gains, the compliance and safety level of infrastructure, improvements in service quality and the development of traffic volumes.

RFI should receive additional funding in 2023 as part of the NRRP both in the form of pre-financing and reimbursements for reported expenses, in line with progress made on the relevant projects.

Furthermore, the projects in the scope of the 2021-2027 Development and Cohesion Fund are being identified, and the fund has set aside additional national resources to supplement the objectives of Next Generation EU and the 2021-2027 EU programming period.

At the same time, the company continues to seek financing for programmes co-financed by the European Union, such as the 2014-2020 national operating programmes (PON) and the regional operating programmes (POR), and for the financing of the TEN-T networks (Connecting Europe Facility), with respect to both the conclusion of the 2014-2020 programming and the new 2021-2027 programming.

The Italian government has introduced legislative measures for the funding of works under construction to meet the extraordinary need for resources to finance work on the railway network identified in 2022, and which will presumably also be the case in 2023 for the projects currently underway, due to the rise in the prices of construction materials, fuel and energy products. These measures include:

- a price adjustment fund (provided for by article 1-septies.8 of Decree law no. 73/2021) to be used to finance ongoing works by offsetting the rise in prices affecting work performed and accounted for in 2021 (RFI should

receive €0.023 billion) and 2022 for works not covered by the NRRP, the Supplementary National Plan or commissioned works, for which financing applications have been presented;

- a fund for the continuation of public works (provided for by article 7.1 of Decree law no. 76/2020) to be used to finance works being performed under the NRRP or the Supplementary National Plan or commissioned works by subsidising the rise in prices affecting works performed and accounted for in 2022 (RFI should receive €0.015 billion) and 2023 as indicated in the 2023 Budget Act, which refinanced the fund;
- a fund for the start-up of works that cannot be postponed (provided for by article 26.7 of Legislative decree no. 50/2022), earmarking €3.8 billion for RFI for calls for tenders launched in 2022; the 2023 Budget Act provides for the refinancing of an additional €10 billion for calls for tenders to be made in 2023 for the various contractors.

On behalf of the board of directors

The Chairwoman

FINANCIAL STATEMENTS

INCOME STATEMENT

	Note	2022	Euros 2021
Revenue from sales and services	(4)	3,075,386,935	2,892,128,096
Other income	(5)	158,061,360	164,877,413
Total revenue		3,233,448,295	3,057,005,509
Personnel expense	(6)	(1,488,245,680)	(1,544,945,668)
Raw materials, consumables, supplies and goods	(7)	(1,110,514,194)	(1,067,952,497)
Services	(8)	(928,698,476)	(901,867,561)
Use of third-party assets	(9)	(38,675,476)	(35,456,662)
Other operating costs	(10)	(87,272,935)	(86,208,363)
Internal work capitalised	(11)	940,608,669	1,031,770,550
Total operating costs		(2,712,798,092)	(2,604,660,201)
Amortisation and depreciation	(12)	(136,970,428)	(110,745,816)
Impairment gains (losses)	(13)	(101,903,299)	(69,350,088)
Provisions	(14)	30,000,000	–
Operating profit		311,776,476	272,249,404
Net financial income (expense)		(48,811,003)	2,399,870
Financial income	(15)	1,652,859	38,484,409
Financial expense	(16)	(50,463,862)	(36,084,539)
Pre-tax profit		262,965,473	274,649,274
Income taxes	(17)	–	–
Profit from continuing operations		262,965,473	274,649,274
Profit (loss) from assets held for sale, net of taxes		–	–
Profit for the year		262,965,473	274,649,274

STATEMENT OF COMPREHENSIVE INCOME

	Note	2022	<i>Euros</i> 2021
Profit for the year		262,965,473	274,649,274
Items that will not be reclassified to profit or loss			
Actuarial losses	(30)	39,473,400	(18,286,818)
Tax effect on actuarial gains (losses)			
Items reclassified to profit or loss	(30)	5,093,785	8,265,971
Items that will or may be reclassified to profit or loss provided that they meet specific conditions			
Cash flow hedges – effective portion of changes in fair value	(30)	5,941,627	5,037,687
Net exchange gains (losses)			
Cash flow hedges - tax effect of the effective portion of changes in fair value			
Available-for-sale financial assets			
Tax effect of available-for-sale financial assets			
Other comprehensive income (expense), net of tax effect		50,508,812	(4,983,160)
Comprehensive income		313,474,285	269,666,114

STATEMENT OF FINANCIAL POSITION

		<i>Euros</i>	
	Note	31.12.2022	31.12.2021
Assets			
Property, plant and equipment	(19)	34,798,969,118	34,844,685,306
Investment property	(20)	1,109,815,679	1,099,791,042
Intangible assets	(21)	927,930,849	799,654,781
Equity investments	(22)	143,773,844	143,773,844
Financial assets (including derivatives)	(23)	146,991,828	72,331,103
Trade receivables	(26)	1,620,353	1,745,531
Other assets	(24)	3,186,119,523	2,653,879,626
Total non-current assets		40,315,221,194	39,615,861,233
Inventories	(25)	857,142,955	849,275,720
Trade receivables*	(26)	909,670,400	1,034,757,449
Financial assets (including derivatives)	(23)	430,409,756	148,081,214
Cash and cash equivalents	(28)	1,462,555,363	711,723,445
Tax assets	(29)	309,982	267,900
Other assets	(24)	1,496,718,575	1,463,564,700
Financial assets arising from service concession arrangements*	(27)	6,804,113	14,012,390
Total current assets		5,163,611,144	4,221,682,818
Assets held for sale and disposal groups		–	–
Total assets		45,478,832,338	43,837,544,051
Equity			
Share capital	(30)	31,528,425,067	31,528,425,067
Reserves	(30)	188,232,632	174,500,167
Valuation reserves	(30)	(130,163,961)	(180,672,774)
Retained earnings	(30)	2,245,760,413	2,134,843,603
Profit for the year	(30)	262,965,473	274,649,274
Total equity		34,095,219,624	33,931,745,337
Liabilities			
Loans and borrowings	(31)	2,176,409,842	2,231,934,030
Post-employment and other employee benefits	(32)	323,258,132	403,835,102
Provisions for risks and charges	(33)	485,921,406	659,608,760
Deferred tax liabilities		–	–
Financial liabilities (including derivatives)	(34)	42,059,838	29,309,601
Trade payables	(36)	16,494,785	16,583,895
Other liabilities	(35)	87,603,086	96,132,222
Total non-current liabilities		3,131,747,089	3,437,403,610
Loans and borrowings and current portion of non-current loans and borrowings	(31)	565,164,777	470,124,299
Trade payables	(36)	3,449,207,815	3,063,219,914
Financial liabilities (including derivatives)	(34)	12,064,407	15,713,460
Other liabilities	(35)	4,225,428,626	2,919,337,431
Total current liabilities		8,251,865,625	6,468,395,104
Liabilities held for sale and disposal groups		–	–
Total liabilities		11,383,612,714	9,905,798,714
Total equity and liabilities		45,478,832,338	43,837,544,051

*Amounts due as consideration for service concessions have been reclassified from the caption "Current trade receivables" to "Current financial assets arising from service concession arrangements" in order to present them properly.

STATEMENT OF CHANGES IN EQUITY

(Euros)										
Equity										
	Share/quota capital	Reserves				Other reserves	Total reserves	Retained earnings	Profit for the year	Total equity
		Reserves	Valuation reserves							
		Legal reserve	Hedging reserve	Actuarial reserve						
Balance at 1 January 2021	31,528,425,067	98,726,534	(26,867,731)	(148,821,883)	73,859,072	(3,104,008)	2,098,466,919	38,291,246	33,662,079,224	
Dividend distribution						-			-	
Allocation of profit for the previous year		1,914,562				1,914,562	36,376,684	(38,291,246)	-	
Changes due to demerger						-			-	
Recognised profits/(losses) of which:						-			-	
Cash flow hedges - effective portion of changes in fair value			5,037,687			5,037,687			5,037,687	
Net actuarial losses				(18,286,818)		(18,286,818)			(18,286,818)	
Other changes			8,265,971			8,265,971			8,265,971	
Non-recurring transactions						-			-	
Profit for the year								274,649,274	274,649,274	
Balance at 31 December 2021	31,528,425,067	100,641,096	(13,564,073)	(167,108,701)	73,859,072	(6,172,605)	2,134,843,603	274,649,274	33,931,745,338	
Balance at 1 January 2022	31,528,425,067	100,641,096	(13,564,073)	(167,108,701)	73,859,072	(6,172,605)	2,134,843,603	274,649,274	33,931,745,338	
Dividend distribution								(150,000,000)	(150,000,000)	
Allocation of profit for the previous year		13,732,464				13,732,464	110,916,810	(124,649,274)	-	
Recognised profits/(losses) of which:						-			-	
Cash flow hedges - effective portion of changes in fair value			5,941,627			5,941,627			5,941,627	
Net actuarial gains				39,473,400		39,473,400			39,473,400	
Other changes			5,093,785			5,093,785			5,093,785	
Non-recurring transactions						-			-	
Profit for the year								262,965,473	262,965,473	
Balance at 31 December 2022	31,528,425,067	114,373,560	(2,528,661)	(127,635,301)	73,859,072	58,068,672	2,245,760,413	262,965,473	34,095,219,624	

STATEMENT OF CASH FLOWS

		<i>Euros</i>	
	Note	2022	2021
Profit for the year		262,965,473	274,649,274
Income taxes		–	–
Net financial income (expense)	<i>(15)(16)</i>	48,811,003	(2,399,870)
Amortisation and depreciation	<i>(12)</i>	136,970,428	110,745,816
Accruals to provisions and impairment losses		20,623,209	163,925,176
Gains on sales	<i>(5) (10)</i>	(105,216,026)	(104,886,847)
Change in inventories	<i>(25)</i>	(7,867,235)	177,391,039
Change in trade receivables	<i>(26)</i>	125,212,226	(432,392,370)
Change in trade payables	<i>(36)</i>	385,892,112	514,566,495
Change in other assets and liabilities	<i>(24) (35) (29)</i>	723,053,207	387,266,393
Utilisation of the provisions for risks and charges	<i>(33)</i>	(177,623,672)	(24,955,287)
Payment of employee benefits	<i>(32)</i>	(51,956,657)	(63,513,551)
Financial income collected/(financial expense paid)	<i>(15)(16)</i>	(35,720,736)	(36,630,609)
Taxes (paid)/collected		–	–
Net cash flows generated by (used in) operating activities		1,325,143,332	963,765,660
Increases in property, plant and equipment	<i>(19)</i>	(5,817,795,142)	(7,786,512,452)
Investment property	<i>(20)</i>	(19,546,174)	(12,158,683)
Increases in intangible assets	<i>(21)</i>	(204,213,678)	(133,460,122)
Increases in equity investments	<i>(22)</i>	(140,434,100)	(28,086,000)
Investments, before grants		(6,181,989,094)	(7,960,217,257)
Grants for property, plant and equipment	<i>(19)</i>	5,828,217,738	7,376,213,520
Grants for investment property	<i>(20)</i>	–	470,793
Grants for intangible assets	<i>(21)</i>	–	–
Grants for equity investments	<i>(22)</i>	140,434,100	28,086,000
Grants		5,968,651,838	7,404,770,313
Decreases in property, plant and equipment	<i>(19)</i>	109,866,283	15,163,002
Decreases in investment property	<i>(20)</i>	6,211,711	2,941,260
Decreases in intangible assets	<i>(21)</i>	–	–
Decreases in equity investments and profits	<i>(22)</i>	–	2,198
Decreases		116,077,994	18,106,460
Net cash flows used in investing activities		(97,259,262)	(537,340,484)
Disbursement and repayment of non-current loans	<i>(31)</i>	38,420,009	(436,428,812)
Disbursement and repayment of current loans	<i>(31)</i>	(565,333)	(50,000,000)
Grants related to assets (for loans)	<i>(23)</i>	(105,193,667)	497,059,552
Lease liabilities	<i>(34)</i>	(16,223,329)	(16,603,080)
Change in financial assets	<i>(23)</i>	20,267,348	38,537,104
Change in financial liabilities	<i>(34)</i>	(82,982)	(89,252)
Dividends	<i>(30)</i>	(150,000,000)	–
Change in financial assets/liabilities for future works and service concession arrangements	<i>(27)</i>	7,208,277	–
Net cash flows generated by financing activities		(206,169,677)	32,475,513
Total cash flows		1,021,714,393	458,900,689
Opening cash and cash equivalents		859,804,656	400,903,967
Closing cash and cash equivalents		1,881,519,049	859,804,656
<i>of which: intragroup current account</i>	<i>(23) (28)</i>	418,963,686	148,081,211

NOTES TO THE FINANCIAL STATEMENTS

1. Introduction

Rete Ferroviaria Italiana (the "company" or "RFI") is a company set up in accordance with Italian law and is based in Italy. Its registered office is in Roma.

It is managed and coordinated by Ferrovie dello Stato Italiane S.p.A. ("FS Italiane S.p.A.").

The directors approved these financial statements on 6 March 2023 and they will be made available to the shareholder for approval and subsequent filing within the terms established by law. The shareholder has the power to make changes to these financial statements.

The company opted not to prepare consolidated financial statements in accordance with the exemption allowed by IFRS 10. The consolidated financial statements are prepared by FS Italiane S.p.A. which is RFI's direct parent. This company has its registered office in Piazza della Croce Rossa 1, Roma, and the consolidated financial statements can be obtained at the above address in accordance with the terms and methods set out in the current regulations.

KPMG S.p.A. was appointed independent auditor for the 2020-2022 three-year period.

2. Basis of preparation

These financial statements have been prepared in accordance with the IFRS (which include the International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS)) issued by the International Accounting Standards Board (IASB) and the interpretations issued by the International Financial Reporting Interpretations Committee (IFRIC) and the Standing Interpretations Committee (SIC), endorsed by the European Union pursuant to Regulation (EC) no. 1606/2002 and in effect at the reporting date ("IFRS"). Specifically, the company consistently applies the IFRS to all periods presented in these financial statements.

Furthermore, these financial statements have been prepared on the basis of the best knowledge of the IFRS and considering best practices in this respect. Any future guidance and interpretations will be applied in future years, as established by the standards over time.

The financial statements have been prepared and presented in Euro, which is the company's functional currency, i.e., the currency of the primary economic environment in which it operates. Unless otherwise stated, all amounts included in the tables and comments of the following notes are expressed in thousands of Euros.

These financial statements comprise a statement of financial position, an income statement, a statement of comprehensive income, a statement of changes in equity, a statement of cash flows and the notes thereto. Specifically:

- the statement of financial position has been prepared by classifying assets and liabilities as "current/non-current", with the specific separation of assets/liabilities held for sale or included in a disposal group;
- the income statement has been prepared by classifying operating costs by nature, indicating the profit (loss) from continuing operations separately from any profit (loss) from discontinued operations;
- the statement of comprehensive income includes the profit (loss) for the year and other changes in equity attributable to transactions that are not carried out with owners in their capacity as owners;
- the statement of changes in equity shows the profit (loss) for the year separately from any other changes not through profit or loss;

- the statement of cash flows has been prepared by presenting cash flows from operating activities using the indirect method.

The annual report also includes the directors' report accompanying the financial statements.

These financial statements have been prepared on a going-concern basis, as the directors established that there are no financial or operational indicators or any other indications of critical issues about the company's ability to meet its obligations in the foreseeable future and, specifically, in the next 12 months. Reference should be made to note 4 - Financial risk management for a description of the company's financial risk management procedures.

The financial statements have been prepared on the historical cost basis, except for those items which are measured at fair value, as required.

Furthermore, "current" refers to the 12 months immediately after the reporting date, while "non-current" refers to periods more than 12 months after the reporting date.

These financial statements have been prepared using the same accounting policies applied when drawing up the financial statements at 31 December 2021, except for that set out below.

3. Significant accounting policies

The most significant accounting policies applied to the preparation of these financial statements are described below.

Property, plant and equipment

Property, plant and equipment are recognised at purchase or production cost, net of accumulated depreciation and impairment losses, if any. The purchase or production cost includes any charges that are directly incurred to make assets available for use, as well as dismantlement and removal charges, if any, that will be incurred as a result of contractual obligations that require the asset to be returned to its original conditions. Any financial expense that is directly attributable to the acquisition, construction or production of qualifying assets is capitalised and depreciated on the basis of the useful life of the asset to which it refers. It is no longer capitalised when all operations to bring the asset in the conditions necessary to ensure its use have been completed. Leasehold improvements or costs to upgrade and transform property, plant and equipment are recognised under assets.

Any charges incurred for ordinary maintenance and repairs are directly taken to profit or loss when incurred. Costs to upgrade or replace an existing part or for extraordinary maintenance are capitalised as a direct increase in the asset. Where inspections or replacement of parts at regular intervals are planned, the related charges are capitalised.

Depreciation begins when the asset becomes available for use and is calculated based on the cost of the asset, net of the residual amount, being the estimated recoverable amount of the infrastructure at the end of the concession.

Depreciation is charged systematically and on a straight-line basis at variable rates based on train-km production volumes. "Train-km" means the total number of kilometres travelled by trains on a railway infrastructure expressed in millions/year. Specifically, depreciation is calculated based on the ratio of quantities generated in the year to total production expected throughout the concession term, applied to the depreciable cost of the infrastructure at the reporting date, and considering future investments which guarantee a sufficient efficiency and security level of

the infrastructure equal to that of the current year (in particular, extraordinary maintenance and renewals), being fully covered by grants and therefore economically borne by the government. Consequently, future investments are considered in the calculation of the infrastructure's total production capacity, and, accordingly, with an impact on the calculation of the depreciation rate. If there are no government grants, the depreciation of the network is calculated based on the ratio of quantities generated in the year to total production expected throughout the concession term, without considering those related to the future costs necessary to ensure the efficiency of the infrastructure in the same period (in particular, extraordinary maintenance and renewals).

The depreciable cost of investments is the sum of all costs incurred not yet amortised, including any interest expense accrued during or for the development of assets, net of grants related to assets, excluding the expected residual carrying amount of the railway infrastructure at the end of the concession, in order to consider the related transferability against consideration.

Property, plant and equipment which, together with intangible assets and investment property, make up the railway infrastructure, comprise seven lines as shown in the table below.

For each line, RFI uses the number of train-km actually sold during the year and resulting from the company's specific monitoring system as the indicator of the quantity generated during the year.

The depreciation rates applied in 2022 and 2021 are as follows:

	Production indicators	
	2022	2021
Po valley line and international transits (Line A)	2.40%	2.03%
North Tyrrhenian line and confluent lines (Line B)	2.40%	2.25%
Backbone and confluent lines (Line C)	2.40%	1.99%
South Tyrrhenian line (Line D)	2.40%	2.19%
Adriatic line and Apennines cross-rails (Line E)	2.40%	2.20%
Complementary network (Line F)	2.40%	2.20%
HS/HC network (Line G)	2.40%	1.71%

The depreciation rates and the residual carrying amount are revised and updated where necessary at each year end. Land is depreciated only in respect of capitalised reclamation costs.

Property, plant and equipment are derecognised when they are sold or when no more future economic benefits are expected from their use or disposal. Any gain or loss (calculated as the difference between the disposal amount, net of sale costs, and the carrying amount) is recognised in profit or loss in the year the asset is derecognised.

Leased assets

i. Identification

At the inception date of the lease (i.e., the earlier of the date of a lease agreement and the date of commitment by the parties to the principal terms and conditions of the lease) and, subsequently, the company reassesses whether a contract is, or contains, a lease only if the terms and conditions of the contract are changed. In particular, a contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration. For a contract that is, or contains, a lease, the company accounts for each lease component within the contract as a lease separately from non-lease components of the contract, which are accounted for in accordance with other standards.

The commencement date is the date on which a lessor makes an underlying asset available for use by a lessee. It is determined by assessing the length of the non-cancellable period of a lease, i.e., the period in which the contract is enforceable, including any rent-free periods provided to the lessee by the lessor. In addition to this term, the company considers:

- the period covered by the option to renew the lease if the company is reasonably certain to exercise the renewal option;
- periods after the termination option if the company is reasonably certain not to exercise the option.

Options to terminate the lease held only by the lessor are not considered.

The company has opted not to recognise short-term leases (i.e., those with a term of 12 months or less) or leases for low-value assets (i.e., assets that, when new, are worth €10,000 or less or leases with a contractual value of €10,000 or less) in accordance with IFRS 16. The company recognises the lease payments associated with these types of leases as an expense on either a straight-line basis over the lease term or another systematic basis if that basis is more representative of the pattern of the lessee's benefit.

ii. Subsequent measurement

At the commencement date of a lease, the company recognises the right-of-use asset under the relevant non-current assets caption depending on the nature of the asset subject to the lease contract and the lease liability in current and non-current financial liabilities. The right-of-use asset is initially measured at cost, including the amount of the initial measurement of the lease liability, adjusted by any lease payments made at or before the commencement date, plus any initial direct costs incurred by the lessee and an estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease, less any lease incentives received.

The company measures the lease liability at the present value of the remaining lease payments, discounted using the interest rate implicit in the lease for the remainder of the lease term, if that rate can be readily determined, or the lessee's incremental borrowing rate if it cannot. The lease payments included in the measurement of the lease liability include fixed payments, variable lease payments that depend on an index or a rate, any residual value guarantees, the exercise price of a purchase option (if the company is reasonably certain to exercise that option), the exercise price of an extension option (if the company is reasonably certain to exercise that option) and payments of penalties for terminating the lease (if the lease term reflects the lessee exercising an option to terminate the lease).

The right-of-use asset is subsequently depreciated on a straight-line basis over the entire term of the contract, unless the contract provides for the transfer of ownership at the end of the lease or the cost of the lease reflects the fact that the purchase option will be exercised. If the lease transfers ownership of the underlying asset to the lessee by the end of the lease term, the company depreciates the right-of-use asset from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. The estimated useful lives of right-of-use assets are calculated using the same depreciation requirements as those for the relevant intangible assets or property, plant and equipment. Furthermore, the right-of-use asset is recognised net of any impairment losses on the cash-generating unit (CGU) and is adjusted to reflect the remeasurement of the lease liability.

The lease liability is subsequently measured at amortised cost using the effective interest method and is remeasured whenever there is a change in future lease payments resulting from a change in an index or a rate used to determine those payments, a change in the amount that the company expects to be payable under a residual value guarantee or when the company changes its assessment of an option to purchase the underlying asset or extend or terminate the lease. If the lease liability is remeasured, the company adjusts the right-of-use asset. If the carrying amount of the right-of-use asset is reduced to zero, any remaining amount is recognised in profit or loss.

In the statement of financial position, the company includes right-of-use assets within the same captions as that within which the corresponding assets would be presented if they were owned, and the lease liabilities in other financial liabilities. In the income statement, interest expense on the lease liability is a component of financial expense and is presented separately from the depreciation charge for the right-of-use asset.

Investment property

Investment property is property held to earn rentals and/or for capital appreciation rather than for sale in the ordinary course of business. Furthermore, investment property is not used in the production or supply of goods or services or for administrative purposes. This caption is recognised using the criteria applied to property, plant and equipment.

If a property development project is launched to be subsequently sold, the properties are reclassified to inventories following the change in use. Their carrying amount at the date of the change in use is considered a cost for subsequent recognition under inventories and depreciation is suspended.

Transfers to, or from, investment property are made only when there is a change in use. In and of itself, a change in management's intentions for the use of a property does not provide evidence of a change in use.

Intangible assets

Intangible assets are identifiable, non-monetary assets without physical substance, that can be controlled and can generate future economic benefits. They are recognised at purchase and/or production cost incurred to make the asset available for use, net of accumulated amortisation and impairment losses, if any. Interest expense, if any, that accrues during and for the development of intangible assets, is considered part of the purchase cost.

Amortisation begins when the asset is available for use and is calculated using the criteria applied to property, plant and equipment.

Intangible assets comprise: development expenditure; concessions, licences, trademarks and similar rights; assets under development and payments on account.

Research expenditure is recognised in profit or loss when incurred, while development expenditure is recognised under intangible assets when all the following conditions are met:

- the project is clearly identified and any costs referred thereto are identifiable and can be measured reliably;
- the technical feasibility of completing the project can be demonstrated;
- the intention to complete the project and to sell the generated intangible assets can be demonstrated;
- there is a potential market or, in case of internal use, it is demonstrated that the intangible asset is useful for the production of the intangible assets generated by the project;
- technical and financial resources are available which are necessary to complete the project.

If the research phase of an identified internal project to create an intangible asset cannot be distinguished from the development phase, the expenditure on that project is fully charged to profit or loss as if it had been incurred in the research phase only.

The gain or loss arising from the derecognition of an intangible asset is equal to the difference between the net disposal proceeds and the carrying amount of the asset. It is recognised in profit or loss when the asset is derecognised.

Service concession arrangements

Service concession arrangements, where the grantor is a public sector entity and the operator is a private sector entity (public-to-private) fall under the scope of IFRIC 12 only when the requirements for service regulation and control of the residual interest are met. This interpretation is applied when the infrastructure is essential to provide the public with services and the arrangement establishes that the grantor:

- controls or regulates what services the operator must provide with the infrastructure, to whom it must provide them, and at what price; and
- controls - through ownership or otherwise - any significant residual interest in the infrastructure at the end of the term of the arrangement.

The company does not recognise infrastructure for concessions under the scope of IFRIC 12 as property, plant and equipment but rather recognises at fair value either alternatively or jointly: the intangible asset, if the operator has the right to charge users of the public service for the construction or upgrading of the infrastructure; and the financial asset when its construction or upgrade generate an unconditional contractual right to receive cash from or at the direction of the grantor and the grantor has little, if any, discretion to avoid payment. The operator recognises revenue and costs in line with the contractual terms and the stage of completion as provided by construction contracts. Revenue from the prices paid by users continues to be recognised in line with that set out in the subsequent paragraph on revenue recognition. Any intangible assets are amortised over the concession term using a method that reflects the estimated consumption of the economic benefits embedded in the right and the manner of consumption. Accordingly, amortisation is calculated considering the concession term. Provisions for concession commitments include accruals made for the operator's obligation to restore the infrastructure to a specified condition or replace the infrastructure to return it to its normal state of use. They are made when the concession arrangement includes these obligations and the grantor does not receive additional financial benefits.

Impairment losses on intangible assets and property, plant and equipment

Intangible assets and property, plant and equipment with a finite useful life

At each reporting date, a test is carried out to check if there is any evidence that property, plant and equipment, intangible assets and investment property may be impaired. For this purpose, account is taken of both external and internal sources of information. With respect to internal sources of information, the following must be considered: the obsolescence or physical wear and tear of the asset, significant changes, if any, in the use of the asset and the economic performance of the asset with respect to expectations. As regards external sources of information, the following must be considered: the trend in the market prices of the assets, negative changes, if any, in technology, markets or laws, the trend in market interest rates or in the cost of capital used to measure investments.

If any such indication exists, the company estimates the recoverable amount of the asset, recognising the impairment loss in profit or loss. The recoverable amount of an asset is the higher of its fair value less costs of disposal and its value in use, i.e., the present value of the future cash flows expected to be derived from the asset. In calculating value in use, the expected future cash flows are discounted using a discount rate which reflects the time value of money, compared to the investment period and risks specific to the asset. The recoverable amount of an asset that does not generate largely independent cash flows is calculated in relation to the cash-generating unit to which this asset belongs.

Impairment losses are recognised in profit or loss when the carrying amount of the asset, or of the related cash generating unit to which the asset is allocated, exceeds its recoverable amount. Impairment losses on cash generating units are first allocated to reduce the assets of the unit pro rata on the basis of the carrying amount of each asset in the unit and within the limits of the related recoverable amount. If the reasons for a previously recognised impairment loss no longer apply, the carrying amount of the asset is reversed in profit or loss without exceeding the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years and had the related amortisation or depreciation been charged.

Intangible assets not yet available for use

The recoverable amount of intangible assets not yet available for use is tested for impairment every year or more frequently if there is an indication that the asset may be impaired.

Investments in subsidiaries, associates, joint arrangements and other investments

Investments in subsidiaries, associates and joint arrangements are measured at cost, including directly-attributable costs, adjusted for impairment.

The company's investments in companies that are neither subsidiaries or associates, which are not listed in an active market and for which the use of an appropriate measurement model is not reliable, are in any case measured at cost which is deemed to reflect the best estimate of fair value.

Impairment losses on investments measured at cost are recognised in profit or loss. If the reasons for an impairment loss no longer apply, the carrying amount of the investments is reserved up to its original cost. Impairment gains are recognised in profit or loss.

Business combinations

IFRS 3 defines business combinations as the transaction or event with which assets acquired and liabilities assumed constitute a business. Specifically, a business is such if production factors and processes applied to such factors contribute to the ability to create outputs.

A business combination may be structured in a variety of ways for legal, taxation or other reasons. It may also include the acquisition, by an entity, of the capital of another entity, the acquisition of the net assets of another entity, the assumption of the liabilities of another entity or the acquisition of part of the net assets of another entity that, when combined, constitute one or more businesses. Business combinations may also take place by issuing equity instruments, transferring cash, cash equivalents or other assets, or a combination thereof. The transaction can take place among the owners of the combining entities or between an entity and the owners of another entity. It may also involve the setting up of a new entity that controls the combined entities or the net assets transferred or the restructuring of one or more combined entities.

Business combinations are accounted for using the acquisition method. The acquisition price shall be reflected on the carrying amount of the acquired assets and allocated based on the fair value of the assets and liabilities, instead of their carrying amount. Any residual difference constitutes goodwill, if positive, or badwill, if negative.

The FS Italiane group recognises business combinations under common control, which are not covered by IFRS 3 or other standards, in accordance with IAS 8 in order to reliably and fairly present the transaction in accordance with OPI 1 (Assirevi's preliminary guidance on the IFRS).

Financial instruments

i. Classification and measurement of financial assets

The company's financial assets are classified and measured considering both the business model used to manage such assets and the characteristics of their cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling financial assets or both. The company performs SPPI (Solely Payment of Principal and Interest) tests on each instrument to determine whether these contractual cash flows are solely payments of principal and interest (in which case the SPPI test is passed).

Financial assets are classified in one of the following categories at initial recognition:

- at amortised cost (AC)
- at fair value through other comprehensive income (FVOCI)
- at fair value through profit or loss (FVTPL)

(a) Financial assets measured at amortised cost

This category includes all financial assets that meet both of the following conditions:

- the financial asset is held solely to collect contractual cash flows (HTC - Held To Collect - business model); and
- the contractual cash flows are solely payments of principal and interest (SPPI test passed).

In this category, financial instruments are initially recognised at fair value, inclusive of transaction costs, and subsequently measured at amortised cost. Interest, calculated using the effective interest method, impairment losses (impairment gains), exchange gains (losses) and gains (losses) on derecognition are recognised in profit or loss.

(b) Financial assets at fair value through other comprehensive income (FVTOCI)

This category includes all financial assets that meet both of the following conditions:

- the asset is held to collect not only contractual cash flows but also the cash flows generated from its sale (HTC&S model); and
- the contractual cash flows are solely payments of principal and interest (SPPI test passed).

In this category, the financial assets are initially measured at fair value, inclusive of transaction costs. Interest (calculated using the effective interest method), impairment losses (impairment gains), exchange gains (losses) and gains (losses) on derecognition are recognised in profit or loss. Other fair value gains or losses are recognised in OCI. Upon derecognition, all cumulative gains or losses previously recognised in OCI are reclassified to profit or loss.

For information about equity instruments which fall under the scope of IFRS 9, reference should be made to the paragraph on Investments in subsidiaries, associates, joint arrangements and other investments.

(c) Financial assets at fair value through profit or loss (FVTPL)

This category includes all financial assets not classified as measured at amortised cost or fair value through other comprehensive income. They are initially and subsequently measured at fair value. Transaction costs and fair value gains and losses are recognised in profit or loss.

ii. Classification and measurement of financial liabilities

Loans and borrowings, trade payables and other financial liabilities are initially recognised at fair value, net of directly-attributable costs, and are subsequently measured at amortised cost, applying the effective interest method. When there is a change in the estimated expected cash flows, the carrying amount of the liabilities is recalculated to reflect this change on the basis of the present value of the new expected cash flows and of the effective internal rate as initially determined. Loans and borrowings, trade payables and other financial liabilities are classified under current liabilities, except for those with a contractual term of more than 12 months after the reporting date and those for which the company has an unconditional right to defer their settlement for at least 12 months after the reporting date. Loans and borrowings, trade payables and other financial liabilities are derecognised when repaid and when the company has transferred all risks and charges related to the instrument.

iii. Classification and measurement of derivatives

The company has opted to continue applying hedge accounting to derivatives, as permitted by IAS 39 until the IASB completes the macro-hedging project to simplify the accounting treatment of hedges.

The company uses derivatives as part of its hedging strategies to mitigate the risk of fair value gains or losses on recognised assets or liabilities or firm commitments (fair value hedges) or changes in cash flows expected from firm commitments or highly probable transactions (cash flow hedges). The effectiveness of hedges is documented

and tested since the inception of the transaction which is periodically (at least at each annual or interim reporting date) measured by comparing the fair value gains or losses on the hedge to those on the hedged item (dollar offset ratio) or, with respect to more complex financial instruments, through statistical analyses based on risk changes.

Fair value hedges: fair value gains or losses on derivatives designated as fair value hedges and which qualify as such are recognised in profit or loss, similarly to fair value gains or losses on hedged assets or liabilities attributable to the hedged risk.

Cash flow hedges: fair value gains or losses on derivatives designated as cash flow hedges and which qualify as such are recognised, only to the extent of the "effective" portion, in other comprehensive income in the hedging reserve. They are subsequently reclassified to profit or loss when the underlying hedged item affects profit or loss. Fair value gains or losses related to the ineffective portion are immediately recognised in profit or loss. Should the underlying transaction no longer be considered highly probable, the related portion of the hedging reserve is immediately reclassified to profit or loss. Conversely, should the derivative be sold, expire or no longer qualify as an effective hedge of the risk for which the transaction was created, the related portion of the hedging reserve is maintained until the underlying item affects profit or loss. Recognition of the hedge as a cash flow hedge is discontinued prospectively.

iv. Subsequent measurement: impairment losses

The company applies the expected credit loss (ECL) model to determine impairment losses, which entails a significant assessment level of the impact of the changes in economic factors on the ECL, which are probability-weighted.

Loss allowances are measured using the general deterioration method and the simplified approach. Specifically:

- under the general deterioration method, the financial instruments are to be classified in three stages which reflect the level of deterioration from the moment the financial instrument is acquired and provide for a different ECL calculation method;
- under the simplified approach, some simplifications may be applied to trade receivables, contract assets and lease assets so that the entities are not required to monitor credit risk changes, as required instead by the general approach. Under the simplified approach, lifetime expected credit losses are recognised, therefore, no stage allocation is necessary. Losses are calculated over the residual life of the asset or receivable, which does not generally exceed 12 months.

As mentioned earlier, when the general deterioration method applies, financial instruments are classified into three stages based on the deterioration of credit quality between initial recognition and the measurement date:

- *Stage 1:* includes all financial assets under assessment on the date of initial recognition regardless of qualitative indicators (e.g., ratings) and except for situations with objective evidence of impairment. Upon subsequent measurement, all financial instruments whose credit risk has not increased significantly since the date of initial recognition or whose credit risk at the reporting date is low, remain in Stage 1. For these exposures, 12-month ECL are provided for that represent the ECL that result from default events that are possible within the 12 months after the reporting date. Interest on Stage 1 financial instruments is calculated on the gross carrying amount (without deducting the loss allowance);

- *Stage 2*: includes the financial instruments whose credit risk has increased significantly since the date of initial recognition, which, however, do not show objective evidence of impairment. For these assets, only lifetime ECL are provided for, i.e., ECL that result from all possible default events over the expected life of a financial instrument. Interest on Stage 2 financial instruments is calculated on the gross carrying amount (without deducting the loss allowance);
- *Stage 3*: includes financial assets with objective evidence of impairment at the reporting date. For these assets, only lifetime ECL are provided for, i.e., ECL that result from all possible default events over the expected life of a financial instrument.

In order to identify the methodological approach to be applied to the assets that are in scope of the impairment requirements and, specifically, the correct probability of default, the company defined a conventional cluster segmentation based on counterparty:

- Public administration: all loans and trade receivables with the government, regions, provinces, municipalities, the EU or related bodies;
- Intragroup: all loans and trade receivables with the parent, subsidiaries and associates;
- Deposits: all deposits with banks;
- Amounts from third parties: loans and trade receivables other than those above, with non-financial companies, producers and consumers.

Furthermore, the company opted to apply the low credit risk exemption allowed by IFRS 9 to assets other than trade receivables that are rated investment grade (between AAA and BBB-). Accordingly, there is no stage allocation: in fact these assets are directly allocated to Stage 1 with a one-year provision.

Therefore, the application of the impairment model entails the following main steps:

- Separation between loans and trade receivables: this distinction isolates the scope of the assets subject to the stage allocation criteria, i.e., all loans. Conversely, these criteria do not apply to trade receivables following the application of the simplified approach whereby expected credit losses are always classified on a lifetime basis.
- Calculation of expected credit losses - loans: the expected credit loss is calculated for each cluster, once the relevant stage has been identified;
- Calculation of expected credit losses - trade receivables: for each cluster, trade receivables are broken down by due date (specifically, falling due, past due up to one year, past due up to two years, past due by more than two years). The expected credit losses are then calculated accordingly.

Fair value measurement

The fair value of instruments quoted on an active market is calculated based on the bid price at the reporting date, while that of instruments not quoted on an active market is determined using financial valuation techniques: specifically, the fair value of interest rate swaps is measured by discounting expected cash flows, while that of currency forwards considers closing rates and the expected differentials of the relevant currencies. Financial assets and financial liabilities measured at fair value are classified using the following three levels of the fair value hierarchy, based on the relevance of the inputs used to determine fair value. Specifically:

- Level 1: financial assets and financial liabilities whose fair value is calculated based on quoted prices (unadjusted) in active markets for identical assets or liabilities that the company can access at the measurement date;
- Level 2: financial assets and financial liabilities whose fair value is calculated based on inputs other than quoted prices included within Level 1 that are observable directly or indirectly;
- Level 3: financial assets and financial liabilities whose fair value is calculated based on unobservable inputs.

The company's portfolio at the reporting date includes over-the-counter (OTC) instruments measured at Level 2. Financial instruments have been measured at fair value using financial models based on market standards. Specifically, this entailed determining the net present value of future cash flows for interest rate swaps.

The inputs used to feed the above models reflect observable market parameters which are available with the main financial info providers.

Specifically, the swap vs. three-month Euribor curve figures were used, as well as those related to the swap vs. six-month Euribor curve, the Eur interest rate volatility cube and the credit default swap curve (CDS) of the parties to the derivative contract, which reflect the input widely accepted by market operators to calculate non-performance risk. This risk is calculated using adequate financial valuation techniques and models which include, inter alia, the following factors i) the risk exposure, being the potential mark-to-market exposure throughout the life of the financial instrument, ii) adequate CDS curves to reflect their probabilities of default (PD).

In accordance with IFRS 13, starting from the amount of the IRS and the option (for the collar) unadjusted by credit risk, the related credit value adjustment and credit adjusted fair value have been calculated.

Inventories

Inventories are recognised at the lower of purchase and/or production cost and net realisable value. Cost is calculated using the weighted average cost method. The net realisable value of finished products and property is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. The net realisable value of raw materials, consumables and supplies is replacement cost.

Purchase cost includes additional charges, while production cost comprises directly-attributable costs and a portion of indirect costs that are reasonably attributable to the products.

Obsolete and/or slow-moving inventories are written down to reflect their estimated possible use or future sale, through the recognition of a specific allowance for inventory write-down. The write-down is derecognised in subsequent years if the reasons therefor no longer apply.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and available bank deposits and any other forms of short-term investment, with an initial maturity of three months or less, net of impairment losses calculated in accordance with IFRS 9. At the reporting date, current account overdrafts are classified in the statement of financial position as loans and borrowings under current liabilities. Cash and cash equivalents are measured at fair value, which usually corresponds to the nominal amount, through profit or loss.

Employee benefits

Short-term benefits

Short-term benefits comprise wages, salaries, related social security contributions, holidays paid and incentives paid out in the form of bonuses payable in the 12 months after the reporting date during which the employees provide their service. These benefits are accounted for as personnel expense components in the period in which the employees provide their service.

Defined benefit plans and defined contribution plans (Post-employment benefits and Free Travel Card)

The company has both defined benefit and defined contribution plans in place. The defined contribution plans are managed by third-party fund managers, in relation to which there are no legal or any other obligations to pay additional contributions if the fund does not have sufficient assets to meet the commitments with employees. With respect to the defined contribution plans, the company pays contributions, either voluntarily or as required by contract, into public and private insurance pension funds. Contributions are recognised as personnel expense on an accruals basis. Advance payments for contributions are recognised as an asset that will be repaid or offset against future payments, if due. For these plans, the actuarial and the investment risks are borne by employees.

A defined benefit plan is a plan that cannot be classified as a defined contribution plan. Under defined benefit plans, the amount of the benefit to be paid to the employee can be quantified only after the termination of the employment relationship, and is linked to one or more factors, such as age, years of service and remuneration. Therefore, defined benefit obligations are determined by an independent actuary using the projected unit credit method. The present value of defined benefit plans is determined by discounting future cash flows at an interest rate equal to that of (high-quality corporate) bonds issued in the foreign currency in which the liability will be settled and that takes account of the term of the related pension plan. Actuarial gains and losses are fully recognised in profit or loss in the relevant year.

Specifically, the company manages a defined benefit plan that consists of post-employment benefits (Italian "TFR"). Italian companies are required to accrue a provision pursuant to article 2120 of the Italian Civil Code, which is treated as deferred remuneration and is based on employees' duration of service and the remuneration they receive during that time. Starting from 1 January 2007, Law no. 296 of 27 December 2006, the "2007 Finance Act" and subsequent amendments and additions, introduced significant amendments to TFR regulations, including the employees' right to choose to transfer the TFR being accrued either to supplementary pension funds or to the "Treasury Fund" managed by INPS (the Italian Social Security Institute). Consequently, the obligation to INPS and the contributions paid into supplementary pension funds are now treated, pursuant to IAS 19 Employee benefits, as defined contribution plans, while the amounts recognised under post-employment benefits at 1 January 2007 are still treated as defined benefit plans.

The company also has a defined benefit pension plan in place, the "Free Travel Card" that gives current and retired employees and their relatives, the right to use – free of charge or, in some cases, for an admission fee – the trains managed by the FS Italiane group.

Consequently, in accordance with the above-mentioned actuarial techniques, a provision is recognised which reflects the discounted charge for retired employees entitled to benefits, and the benefits accrued for employees

in force to be disbursed at the end of the employment. The same accounting treatment is applied to the Free Travel Card benefits and the effects arising from actuarial gains and losses as for post-employment benefits.

Provisions for risks and charges

Provisions for risks and charges are recognised to cover specific liabilities that are certain or probable, but whose amount and/or due date is unknown at the reporting date. A provision is recognised when there is a present obligation (legal or constructive), as a result of a past event, and it is probable that an outflow of resources will be required to settle the obligation. The provisions are stated as the best estimate of the expenditure required to settle the obligation. The discount rate used to determine the present value of the liability reflects the current market value and considers the risk specific to each liability.

Where the effect of the time value of money is material and the settlement dates of obligations can be estimated reliably, the amount of a provision is the present value of the expenditures expected to be required to settle the obligation. The discount rate reflects current market assessments of the time value of money and the risks specific to the liability. The increase in the provision due to the passage of time is recognised as interest expense.

Risks for which a liability is only possible are disclosed in the specific section on contingent liabilities without accruing any provisions.

Revenue from contracts with customers

i. Initial recognition and subsequent measurement

The company recognises revenue in order to depict the transfer of the promised goods and/or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. Revenue is recognised using the five step model, which entails: i) identifying the contract with the customer, ii) identifying the performance obligations in the contract, iii) determining the transaction price, iv) allocate the transaction price to the performance obligations in the contract and v) recognising revenue.

Revenue is measured considering the contract terms and the commercial practices usually applied to transactions with customers. The transaction price is the amount of consideration (which may include fixed amounts, variable amounts, or both) to which the company expects to be entitled in exchange for transferring promised goods or services to a customer. Control refers to the ability to direct the use of, and obtain substantially all of the remaining benefits from, the asset (good/service). The total consideration of contracts for the provision of services is allocated among all services based on the selling prices of the related services as if they had been sold separately. For each contract, the reference element for the recognition of revenue is the single performance obligation. For each performance obligation, the company recognises revenue when (or as) it satisfies a performance obligation by transferring a promised good or service (i.e., an asset) to a customer. An asset is transferred when (or as) the customer obtains control of that asset. For performance obligations satisfied over time, revenue is recognised over time, assessing the progress towards complete satisfaction of the performance obligation at each reporting date. The company measures progress in accordance with an input method (cost-to-cost method). Accordingly, revenue is recognised based on the inputs used to satisfy the obligation up to the reporting date, compared to the total inputs assumed to satisfy the entire obligation. When the inputs are distributed consistently over time, the company recognises the corresponding revenue on a straight-line basis. In some circumstances, when the company is unable

to reasonably measure the outcome of a performance obligation, revenue is recognised only to the extent of the costs incurred.

The nature and timing of performance obligations and the significant terms for the satisfaction of performance obligations are summarised below for the company's main contracts with customers:

Products and services	IFRS 15 recognition Nature and terms of performance obligations, significant terms of payment
Sale of goods and services and construction contracts (standard)	<p>Under IFRS 15, revenue is measured considering the contract terms and the commercial practices usually applied to transactions with customers. The transaction price is the amount of consideration (which may include fixed amounts, variable amounts, or both) to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer. Control refers to the ability to direct the use of, and obtain substantially all of the remaining benefits from, the asset (good/service). The total consideration of contracts for the provision of services is allocated among all services based on the selling prices of the related services as if they had been sold separately.</p> <p>Under IFRS 15, for each contract, the reference element for the recognition of revenue is the single performance obligation. For each separately-identified performance obligation, an entity shall recognise revenue when (or as) the entity satisfies a performance obligation by transferring a promised good or service (i.e., an asset) to a customer. An asset is transferred when (or as) the customer obtains control of that asset.</p> <p>For performance obligations satisfied over time, revenue is recognised over time, assessing the progress towards complete satisfaction of the performance obligation at each reporting date. The group measures progress in accordance with an input method (cost-to-cost method). Accordingly, revenue is recognised based on the inputs used to satisfy the obligation up to the reporting date, compared to the total inputs assumed to satisfy the entire obligation. When the inputs are distributed consistently over time, the group recognises the corresponding revenue on a straight-line basis. In some circumstances, when the group is unable to reasonably measure the outcome of a performance obligation, revenue is recognised only to the extent of the costs incurred.</p>
Fees	<p>They are the amount paid to use the train paths necessary to carry out the long- and short-haul domestic passenger rail transport and for freight transport (chapter 5 of the Network Prospectus) which reflect the individual performance obligations (POs).</p> <p>The fee is calculated as the sum of components A and B (chapter 6 of the Network Prospectus):</p> <ul style="list-style-type: none"> - component A relates to the wear and tear of the infrastructure; - component B relates to the market segments' ability to pay. <p>Revenue is calculated every month with progress bills based on the contractually-agreed amounts.</p> <p>Adjustment takes place every quarter based on the actual number of trains in</p>

	<p>operation. This figure is calculated for each train by pricing the train paths under the contract and those actually used by each railway company.</p>
Ferrying services	<p>This service relates to the transport of trains by ferry and is part of the minimum access package ("MAP").</p> <p>Although it also comprises shunting, boarding and disembarking services, this service is considered a single performance obligation.</p> <p>The tariff is governed by chapter 6 of the Network Statement and is calculated by multiplying the market segments' ability to pay by the km travelled.</p> <p>Revenue is recognised and progress bills are issued.</p> <p>Adjustment takes place every quarter based on the actual number of trains transported.</p>
Electric traction (traffic-related services)	<p>Chapter 5 of the Network Statement includes the supply of electrical energy for traction under additional services.</p> <p>The fee for this service is calculated in accordance with the Ministry of Economic Development decree dated 22 December 2015 and set out in chapter 6 of the Network Statement. It is equal to the sum of the fee for the indirect supply costs and the unit cost of energy, multiplied by electric km.</p> <p>Revenue is recognised every month based on progress billing with quarterly adjustments. The actual cost of electrical energy for traction is calculated within the following year and the billed cost is adjusted with the railway companies.</p>
Other traffic-related services (excluding electric traction)	<p>This contract refers to the traffic-related services covered by chapter 5 of the Network Statement (e.g., parking, water supply, washing sidings, pre-heating, shunting services, fast track, parking, etc.), excluding those covered by the MAP and electric traction.</p> <p>The tariffs for each service are listed in chapter 6 of the Network Statement.</p> <p>Each traffic-related service is considered an individual performance obligation. Consequently, each fee refers to a single PO.</p> <p>Revenue is recognised monthly, while invoices are issued every three months based on the amounts calculated for each railway company and each service.</p>
Health services	<p>The group's Health department offers many different health services to FS Italiane group companies and companies, transport public bodies and accredited private bodies and private parties. These services include fitness assessments for various types of driving licences, checking the mental and physical soundness of transport workers, specialist check-ups, etc..</p> <p>Once the service has been provided and completed, it is entered into the WEB VINE system which will transfer the relevant data necessary for revenue recognition and to issue the related invoice.</p>
Revenue from GSM-R	<p>This contract governs the service that RFI provides to telephone operators, granting non-exclusive access to the GSM frequency band inside railway tunnels, and the maintenance of the related systems. The consideration paid by the above operators is invoiced in accordance with the terms and conditions of the relevant contract.</p>
Processing for third parties	<p>This usually covers long-term contracts for the execution of a work or a group of closely interrelated works. These are contract works performed in accordance with the customer's technical specifications and are not carried out for the protection or safety of the railway operations. This category also includes the services generally related to the construction of an asset, agreed as a single item as per the</p>

	customer's specific instructions. When the agreement is signed with the customer, an "Internal contract" is created which comprises the figures related to the works necessary for revenue recognition purposes. Invoices are issued after reporting, unless in the case of contract advances.
Sale of materials	These contracts cover the sale of "new" materials (mainly technological materials) and "serviceable" materials (mainly superstructure materials). New materials are sold at the more favourable price between the standard and the purchase price, while the sale price of serviceable second-hand materials is usually based on the price of new materials, reduced by a percentage discount to reflect certain variables (e.g., consumption, type, exclusion of transport, etc.). For each delivery of materials, the Site Manager prepares a delivery report, a copy of which is sent to the person in charge of issuing the sale order and the related invoice.

ii. Variable consideration

If the consideration promised in a contract includes a variable amount (e.g., because of discounts, rebates, refunds, credits, price concessions, incentives, performance bonuses, penalties or because the consideration is contingent on the occurrence or non-occurrence of a future event), the company estimates the amount of consideration to which it is entitled. The company estimates variable considerations consistently for similar items, using the expected value or the most likely amount method. They subsequently include in the transaction price the amount of variable consideration estimated, only to the extent that it is highly probable.

iii. Existence of a significant financing component

When a significant financing component exists, revenue is adjusted, both when companies are financed by their customer (advance collection) and when they finance it (deferred collection). The existence of a significant financing component is identified when the contract is signed by comparing expected revenue against the payments to be received. It is not recognised if the period between when the entity transfers a promised good or service and when the customer pays for that good or service is one year or less.

iv. Incremental costs of obtaining a contract and costs to fulfil a contract

The incremental costs of obtaining a contract are those costs that an entity incurs to obtain a contract with a customer that it would not have incurred if the contract had not been obtained (for example, a sales commission), which it expects to recover. Conversely, if no contract is obtained, they are recognised provided that they are explicitly chargeable to the customer. The company recognises the costs incurred to fulfil a contract only when they relate directly to a contract, generate or enhance resources that will be used in satisfying performance obligations in the future and are expected to be recovered.

Government grants

Government grants, when formally assigned and, in any case, when the right to their disbursement is deemed definitive as it is reasonably certain that the company will comply with any conditions attached to the grant and that the grants will be received, are recognised on an accruals basis.

Grants related to assets

They refer to amounts paid by the government and other public authorities to the company for the implementation of initiatives aimed at the construction, reconditioning and expansion of property, plant and equipment. They are recognised as a direct reduction in the cost of the assets to which they refer and decrease the depreciation rates.

Grants related to income

They refer to amounts paid by the government or other public authorities to the company to offset costs and charges incurred. They are recognised under Revenue from sales and services, as a positive component of income.

Dividends

They are recognised in profit or loss when the shareholder's right to receive payment thereof arises. The latter usually coincides with the shareholder's resolution approving dividend distribution.

Dividends distributed to the company's shareholder are presented as a change in equity and recognised under liabilities when their distribution is approved by the shareholder.

Cost recognition

Costs are recognised when they relate to goods and services acquired or consumed in the year or by systematic allocation.

Income taxes

Current taxes are calculated based on estimated taxable profit and in accordance with ruling tax legislation. Deferred tax assets, related to carry forward tax losses, are recognised when it is probable that future taxable profit will be available against which these losses can be recovered. Deferred tax assets and liabilities are calculated using the tax rates that are expected to be applied in the years in which the differences will be realised or settled.

Current taxes, deferred tax assets and liabilities are recognised in profit or loss, except for those relating to items recognised under other comprehensive income or directly taken to equity. In the latter cases, deferred tax liabilities are recognised under the "Tax effect" caption under other comprehensive income or directly in equity, respectively. Deferred tax assets and liabilities are offset when they are levied by the same tax authorities, there is a legally enforceable right to set off the recognised amounts and settlement on a net basis is expected.

Taxes other than income taxes, such as indirect taxes and duties, are included in profit or loss under Other operating costs.

When the conditions set out by IAS 12 are not met, no current or deferred taxes are recognised.

Translation of foreign currency amounts

Any transactions in a currency other than the company's functional currency are recognised at the exchange rate at the date of the transaction. Monetary assets and liabilities denominated in a currency other than the Euro are subsequently adjusted at the closing rate. Non-monetary assets and liabilities denominated in a currency other than

the Euro are recognised at historical cost using the exchange rate at the date of initial recognition. Exchange differences are taken to profit or loss.

Assets held for sale and disposal groups

Non-current assets and liabilities (or disposal groups) whose carrying amount will be recovered principally through a sale transaction rather than through continuing use are classified as held for sale and recognised separately from any other assets and liabilities in the statement of financial position. The corresponding prior year statement of financial position figures are not reclassified. A discontinued operation is a component of the company that either has been disposed of or is classified as held for sale, and:

- represents a separate major line of business or geographical area of operations;
- is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations or;
- is a subsidiary acquired exclusively with a view to resale.

Profits or losses of discontinued operations – either disposed of or classified as held for sale and being divested – are recognised separately in profit or loss, net of tax effects. Prior year corresponding figures, where present, are reclassified and presented separately in the separate income statement, net of tax effects, for comparative purposes. Non-current assets and liabilities (or disposal groups) classified as held for sale, are firstly recognised in accordance with the specific standard applicable to each asset and liability and, subsequently, are recognised at the lower of carrying amount and fair value less costs to sell. Subsequent impairment losses are recognised directly as an adjustment to non-current assets (or disposal groups) classified as held for sale through profit or loss.

Impairment losses are reversed for any subsequent increase in fair value less costs to sell of an asset and may not exceed the cumulative impairment loss that has been previously recognised.

New standards

First-time adoption of standards, amendments and interpretations

The following new standards are effective for annual periods beginning on or after 1 January 2022.

Amendments to IFRS 3, IAS 16, IAS 37, Annual improvements 2018-2020

On 14 May 2020, the IASB issued amendments to the following standards:

- *IFRS 3 Business combinations*: the amendment updates IFRS 3 so that it refers to the revised Conceptual Framework, without affecting the provisions of this standard;
- *IAS 16 Property, plant and equipment*: the amendment prohibits a company deducting from the cost of an asset any proceeds from selling items produced before the asset is available for its intended use. These revenue from sales and its related costs will be recognised in profit or loss;
- *IAS 37 Provisions, contingent liabilities and contingent assets*: the amendment clarifies what is included as the cost of fulfilling a contract when assessing whether a contract is onerous;
- *Annual improvements 2018-2020*: the amendments refer to IFRS 1 *First-time adoption of international financial reporting standards*, IFRS 9 *Financial instruments*, IAS 41 *Agriculture* and the *Illustrative examples* accompanying IFRS 16 *Leases*.

The amendments are effective from 1 January 2022. Given their nature, these amendments, where applicable, had no material impacts on these financial statements.

Standards, amendments and interpretations recently endorsed by the European Union not yet applied
Amendments to IAS 1 Presentation of financial statement and IFRS Practice Statement 2: disclosure of accounting policies; and Amendments to IAS 8 Accounting policies, changes in accounting estimates and errors: definition of accounting estimates

On 12 February 2021, the IASB issued amendments to the following standards:

- Disclosure of accounting policies - amendments to IAS 1 and IFRS practice statement 2;
- Definition of accounting estimates - amendments to IAS 8.

The amendments improve accounting policy disclosures so that they provide more useful information to investors and other primary users of the financial statements and distinguish changes in accounting estimates from changes in accounting policies.

These amendments are effective from 1 January 2023.

Deferred tax related to assets and liabilities arising from a single transaction (Amendments to IAS 12)

On 7 May 2021, the IASB issued amendments to IAS 12 Income taxes clarifying how companies should account for deferred tax on certain transactions such as leases and decommissioning obligations.

The amendments are effective for annual reporting periods beginning on or after 1 January 2023. Early adoption is permitted.

Standards, amendments and interpretations not yet endorsed by the European Union
Classification of Liabilities as Current or Non-current — Deferral of Effective Date (Amendment to IAS 1)

On 23 January 2020, the IASB issued amendments to IAS 1 Presentation of financial statements: classification of liabilities as current or non-current which clarify how to classify liabilities as current or non-current.

The amendments were initially meant to go into force as from 1 January 2022, but the IASB postponed the effective date to 1 January 2024 with the issue of a second document on 15 June 2020.

Lease liability in a sale and leaseback (Amendments to IFRS 16)

On 22 September 2022, the IASB issued Lease liability in a sale and leaseback (Amendments to IFRS 16) which clarifies how a seller-lessee subsequently measures sale and leaseback transactions that satisfy the requirements of IFRS 15 to be accounted for as a sale.

These amendments are effective from 1 January 2024.

USE OF ESTIMATES AND JUDGEMENTS

In preparing the financial statements, the directors applied standards and methods, which in some circumstances rely on difficult and subjective valuations and estimates based on past experience and on assumptions that are from time to time considered to be reasonable and realistic depending on the circumstances. Therefore, the actual amounts of certain financial statements captions calculated according to the above estimates and assumptions may differ in the future, even materially, from those reported in the financial statements, because of the uncertainty

that characterises the assumptions and conditions on which the estimates are based - including the impact of the Covid-19 pandemic, which has not yet ended, Russia's invasion of Ukraine, the macroeconomic situation and the energy crisis, which could lead to widely disparate potential future scenarios with many different effects. Estimates and assumptions are reviewed periodically and the effects of any changes are recognised in profit or loss when they affect the year only. If the revision affects both current and future years, the change is recognised in the year the revision is made and in future years.

Therefore, actual results may differ, even materially, from these estimates following possible changes in the factors considered in the determination of such estimates.

The following accounting standards require the most subjectivity from the directors in the preparation of estimates and would have a material impact on the financial figures if there were a change in the conditions underlying the assumptions used.

Impairment losses - non-financial assets

Property, plant and equipment and intangible assets with a finite life are tested for impairment. Impairment losses are recognised when there is evidence that it will be difficult to recover the related carrying amount through the use or sale of the asset. Impairment tests require the directors to make subjective valuations based on the information available within the company and in the market, as well as from past experience. Furthermore, when a potential impairment loss exists, the company calculates such loss using suitable valuation techniques. The correct identification of impairment indicators and the estimates for calculating them depend on factors that may vary over time, thus affecting valuations and estimates made by the directors.

Impairment losses - financial assets

According to the company's impairment model, an expected loss is the sum of the expected losses that result from possible default events on a financial instrument over a specific time horizon; this results in the recognition of a loss using both past and present figures and forward-looking information. Determining expected credit losses, especially when there are credit-impaired financial assets or which show objective evidence of impairment requires the directors to make subjective valuations based on the information available within the company (e.g., estimating expected cash flows) and in the market, as well as from past experience. The correct identification of impairment indicators and the estimates for calculating them depend on factors that may vary over time, thus affecting valuations and estimates made by the directors.

Extension/termination options in leases

For leases that include extension/termination options, at the commencement date of the lease, the company assesses whether it is reasonably certain to exercise the options and reassesses them whenever a significant event or significant change in circumstances under its control occurs. Assessing the extension option may require the directors to make subjective judgements based on the information available at the lease measurement date and on past experience.

Residual value of property, plant and equipment, investment property and intangible assets with a finite useful life

Under IAS 16, 38 and 40, the depreciable cost of an item of property, plant and equipment, investment property and intangible assets with a finite useful life is calculated by subtracting its residual value. The residual value of the infrastructure and investment property is calculated as the estimated amount that an entity would currently obtain from disposal of an asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of the Concession. The company periodically revises the residual value and measures its recoverability using the best information available at that date. Periodic updates may cause a change in the depreciation rate for future years.

Amortisation and depreciation

The cost of property, plant and equipment, intangible assets with a finite useful life and investment property is depreciated/amortised based on production volumes, as described in detail in the note to property, plant and equipment. The company assesses any technological, usage and sector changes to update these volumes on a regular basis. These updates may entail a change in the amortisation and depreciation period and in the amortisation and depreciation rates of future years.

Calculating the amortisation/depreciation of these assets entails a complex accounting estimate that is influenced by a number of factors, including the estimated production volumes expressed as train-km, the estimated residual value and any changes to the regulatory framework.

Provisions for risks and charges

Provisions are accrued against legal and tax risks which represent the risk of a negative outcome. The recognised provisions relating to these risks reflect the best estimate made by the directors at the reporting date. This estimate entails the adoption of assumptions that depend on factors which may vary over time and which may have significant effects compared to the current estimates made by the directors for the preparation of the company's financial statements.

Fair value of derivatives

The fair value of derivatives that are not quoted on active markets is measured using valuation techniques. The company applies valuation techniques that use inputs that can be observed in the market, either directly or indirectly, at the reporting date, and that are connected to the assets and liabilities being measured. Even if the estimates of the above fair values are considered reasonable, any possible changes in the estimate factors on which the calculation of the aforesaid amounts is based may generate different valuations.

Operating segments

At the reporting date, the company had no debt instruments or shares quoted on a regulated market and was included in the consolidation scope of the FS Italiane group, which provides information on its operating segments in the notes to the consolidated financial statements, in accordance with IFRS 8.2b.

NOTES TO THE INCOME STATEMENT

4. Revenue from sales and services

The tables and comments below give a breakdown of revenue from sales and services.

	(€'000)		
	2022	2021	Change
Revenue from infrastructure services	1,070,902	970,806	100,096
✓ Service concessions	12,244	22,617	(10,373)
✓ Fees	1,048,315	937,947	110,368
✓ Ferrying services	10,343	10,242	101
Other service revenue	547,667	438,729	108,938
Revenue from traffic-related services	413,612	342,676	70,936
Sundry service revenue	66,895	51,621	15,274
✓ Health services	37,433	35,070	2,363
✓ GSM-R revenue	4,257	4,131	126
✓ Other sundry revenue	25,205	12,420	12,785
Processing for third parties	64,097	37,475	26,622
Sale of materials	3,063	6,957	(3,894)
Revenue from contracts with customers	1,618,569	1,409,535	209,034
Sundry revenue	1,341,705	1,371,400	(29,695)
✓ Government grants	1,293,880	1,371,237	(77,357)
✓ EU grants	131	142	(11)
✓ Freight and other accruals or releases	47,694	21	47,673
Revenue from property management	115,113	111,193	3,920
✓ Leases	95,895	99,863	(3,968)
✓ Recharging of building expenses and IRE (registration tax)	12,910	11,040	1,870
✓ Sale of advertising spaces	6,308	290	6,018
Other revenue from sales and services	1,456,818	1,482,593	(25,775)
Total revenue from sales and services	3,075,387	2,892,128	183,259

Revenue from infrastructure services increased by €100,096 thousand as a result of the following factors:

- ✓ the decrease in construction and improvement works carried out as part of the Ferrovia Centrale Umbra concession contract, which led to lower revenue from ancillary services under concession (-€10,373 thousand), with a proportionate reduction in the related costs;
- ✓ the €110,368 thousand increase in fee revenue due to the following changes:
 - the growth in fee revenue, up €244,536 thousand, due to the effect of larger traffic volumes (+€143 million), with peaks in the Premium and Basic segments, and the smaller discount granted to the railway companies under legislation to mitigate the effects of the pandemic (+€101 million, as the grants in 2022 totalled €130 million, including €115 million under Decree law no. 4/2022 and €15 million under Decree law no. 115/2022, compared to 2021 grants of €231 million, including €81 million under Law no. 178/2020 and €150 million under Legislative decree no. 73/2021);
 - the €114,073 thousand decrease in revenue on prior year adjustments mostly due to the HS/HC infrastructure access fees that RFI recovered in 2021 under ART decision no. 88/2021;

- lower revenue from the net performance regime penalty expense and for breach of contract, down €20,095 thousand;
- ✓ a greater number of ferry journeys, up to 6,068 from 6,009 in the previous year, to carry railway material to Sicila for Trenitalia S.p.A., which led to a €101 thousand increase in revenue from ferrying services.

Other service revenue increased by €108,938 thousand as a result of the following:

- ✓ the dramatic spike in energy prices (about +€34,000 thousand) and larger volumes of train-km, especially in the HS segment (around +€37,000 thousand) drove growth of €70,936 thousand in revenue from traffic-related services, substantially due to the supply of electrical energy for traction to the railway companies, offset by the related rise in costs;
- ✓ sundry service revenue increased by €15,274 thousand as a result of:
 - additional health services provided (+€2,363 thousand);
 - greater use of the GSM-R network for the transmission of data and voice communications to support railway operations (+€126 thousand);
 - rise in other sundry revenue +€12,785 thousand, including €9,716 thousand following the renewal of the contract with Tim and Vodafone and the settlement agreement regarding liabilities and assets from/to Wind for 2019-2021;
- ✓ the construction of the Palermo metro rail (€11,672 thousand), the decommissioning of the Porta Romana hub (€11,829 thousand) and the work on the Roma Lido railway line (€7,252 thousand) are the main factors in the €26,622 thousand increase in revenue from processing for third parties, offset by a related rise in costs;
- ✓ revenue from the sale of spare and miscellaneous material is down by €3,894 thousand.

Sundry revenue decreased by €29,695 thousand, mainly as a consequence of the combined effect of the following:

- smaller government grants (-€77,357 thousand), due to three factors:
 - €169,806 thousand decrease in Covid-19 relief grants, in line with the smaller discount offered to railway companies. These grants amounted to €130,194 thousand in 2022 (€115,194 thousand under Decree law no. 4/2022 and €15,000 thousand under Decree law no. 115/2022), compared to €300,000 thousand in 2021 (€150,000 thousand under Law no. 178/2020 - the 2021 Budget Act - and €150,000 thousand under Decree law no. 73/2021);
 - €90,000 thousand increase in government grants allocated by the MEF drawing funds from chapter 1541, as per the Government Programme Contract - Services, which was renewed in 2022;
 - €1,029 thousand increase in other grants, consisting of non-recurring grants disbursed in the second quarter of 2022 in form of a tax credit for the purchase of electricity and natural gas.
- €11 thousand decrease in EU grants;
- €47,673 thousand increase in revenue from freight and other accruals or releases.

Revenue from property management, increased by €3,920 thousand, reflects the growth in turnover generated by advertising at stations and on board trains (+€6,018 thousand), partly offset by the drop in revenue from leases, mainly with Trenitalia, as leases had benefited from prior-year adjustments in 2021.

Revenue from contracts with customers may be analysed as follows:

	(€'000)	
	2022	2021
Italy	1,615,512	1,047,200
EU	1,835	1,639
Non-EU	1,222	696
Total revenue from contracts with customers	1,618,569	1,049,535
Moment of recognition		
At a point in time	45,532	42,223
Over time	1,573,037	1,367,312
Total revenue from contracts with customers	1,618,569	1,409,535
Other revenue from sales and services	1,456,818	1,482,593
TOTAL REVENUE FROM SALES AND SERVICES	3,075,387	2,892,128

With respect to the services listed above, the company has a single-segment structure.

The table below provides information about contract assets and liabilities:

	(€'000)	
	31 December 2022	31 December 2021
Contract assets classified under current/non-current trade receivables	642,335	402,639
Contract assets	151,758	386,986
Contract liabilities	(17,667)	(11,519)

The table below shows the significant changes in contract assets and liabilities for the year:

	(€'000)	
	Contract assets	Contract liabilities
Balance at 31 December 2021	386,986	(11,519)
Revenue recognised during the year which was included in the opening balance of contract liabilities		1,715
Increase in contract liabilities net of amounts recognised under revenue during the year		(7,863)
Reclassifications from contract assets recognised at the beginning of the year	(228,313)	
Increases in contract assets due to the provision of services	(6,915)	
Balance at 31 December 2022	151,758	(17,667)

5. Other income

This caption can be analysed as follows:

	(€'000)		
	2022	2021	Change
Other sundry income			
Income and sundry services	52,534	59,771	(7,237)
Gains	105,527	105,106	421
Total	158,061	164,877	(6,816)

The €6,816 thousand decrease in other sundry income is due to the following changes:

- the €7,237 thousand decrease in income and sundry services, mainly following factors that affected 2021 but not 2022, namely:
 - the €4,098 thousand drop in revenue from other penalties as a result of the recovery of amounts relating to ruling no. 5516/2020 on the laying of double tracks on the Cervaro-Bovino line;
 - the €2,448 thousand decrease mostly in the fees received from Terna for maintenance and remote control operations and from Wind for the installation of the base transceiver station;
- the €421 thousand rise in gains on the sale of land.

6. Personnel expense

This caption may be analysed as follows:

	(€'000)		
	2022	2021	Change
Employees	1,453,545	1,510,401	(56,856)
✓ Wages and salaries	1,082,494	1,110,602	(28,108)
✓ Social security contributions	273,338	290,303	(16,965)
✓ Other expense for employees	18,856	3,811	15,045
✓ Post-employment benefits	75,206	71,325	3,881
✓ Accruals/releases	3,651	34,360	(30,709)
Consultants and contract workers	44	92	(48)
✓ Wages and salaries	7	35	(28)
✓ Social security contributions	37	57	(20)
Other costs	34,657	34,453	204
✓ Temporary workers/seconded personnel and trainees	2,864	2,785	79
✓ Other costs	31,793	31,668	125
Total	1,488,246	1,544,946	(56,700)

Personnel expense shows an overall decrease of €56,700 thousand on 2021, mostly due to the combined effect of lower personnel expense for employees (€56,856 thousand) and consultants and contract workers (€48 thousand), partly offset by the rise in other costs (€204 thousand). More specifically, the decrease in personnel expense for employees (€56,856 thousand) is the result of a series of factors mainly relating to the effects of the national collective bargaining agreement renewal signed on 22 March 2022, which had a positive impact in terms of lower costs than those estimated in previous years, but also led to increases in social security institutions. Furthermore, the growth in the number of employees and the rebound in operations post Covid-19 also offset the aforesaid positive effects of the renewal of the national collective bargaining agreement. The drop in accruals and releases (€30,709 thousand) is primarily due to developments in labour litigation (€6,927 thousand) and the combined effect of smaller provisions (€25,000 thousand) and greater releases (€12,200 thousand) relating to leaving incentives.

The average workforce of the year is as follows:

Average	2022	2021	Change
Managers	272	263	9
Junior managers	5,501	5,453	48
Other	21,859	21,061	798
TOTAL	27,632	26,777	855

7. Raw materials, consumables, supplies and goods

They can be analysed as follows:

	(€'000)		
	2022	2021	Change
Raw materials and consumables	577,483	666,447	(88,964)
Electrical energy and fuel for traction	361,377	320,546	40,831
Lighting and driving force	171,392	78,282	93,110
Accruals/releases	262	2,677	(2,415)
Total	1,110,514	1,067,952	42,562

The total increase of €42,562 thousand in raw materials, consumables, supplies and goods is mainly due to the following factors:

- the €35,601 thousand increase in costs to purchase raw materials, reflecting their higher prices;
- the €2,204 thousand larger costs for the purchase of consumables;
- the €126,769 thousand reduction in the consumption of materials, mainly as a result of:
 - o the €131,970 thousand decrease in the smaller use of materials for investment projects, completely offset by the corresponding increase in capitalised assets;
 - o smaller revenue from internal work, net of consumption of materials, due to the smaller output of frogs, switches, glued insulation joints and equipment by the national workshops (Bari, Pontassieve and Bologna plants), following the rationalising of stocks.
- the €40,831 thousand increase in costs incurred for electrical energy, offset by the related revenue, and fuel for train traction, reflecting the exponential surge in the market cost of electricity in 2022;
- the €93,110 thousand increase in costs for lighting and driving force, also due to the higher cost of electricity;
- the €2,415 thousand decrease in accruals to the allowance for inventory write-down.

8. Services

This caption can be analysed as follows:

	(€'000)		
	2022	2021	Change
Transport services	23,671	18,844	4,827
Other transport-related services	3	-	3
Shunting services	1,090	927	163
Ferrying services	17,517	13,718	3,799
Freight transport services	5,061	4,199	862
Maintenance, cleaning and other contracted services	543,024	536,676	6,348
Contracted services and work	56,120	40,750	15,370
Cleaning and other contracted services	161,665	164,650	(2,985)
Maintenance and repair of immovable and movable property	325,239	331,276	(6,037)

Maintenance accruals and releases	–	–	–
Property services and utilities	122,888	116,324	6,564
Administrative and IT services	119,622	104,405	15,217
External communication and advertising expense	556	393	163
Other sundry services	118,937	125,226	(6,289)
√ Consultancies	349	357	(8)
√ Insurance	16,484	10,215	6,269
√ Professional services	6,158	4,619	1,539
√ Agencies' fees	5	2	3
√ Group common costs	4,233	2,982	1,251
√ Other	99,885	94,918	4,967
√ Accruals/releases	(8,177)	12,133	(20,310)
Total	928,698	901,868	26,830

Services increased by a total of €26,830 thousand, the combined effect of the following factors:

- the €4,827 thousand increase in costs for transport services as a result of higher costs for ferrying services (€3,799 thousand) after a new contract was signed with Blu Jet that entailed the restructuring of rates, higher shunting costs (€163 thousand), freight transport costs (€862 thousand) and other transport-related services (€3 thousand);
- the €15,370 thousand increase in costs for contracted services and work, in line with the related revenue, mainly due to the works for the construction of the Palermo metro rail (€10,608 thousand), the decommissioning of the Milano Porta Romana hub (€11,011 thousand) and the work on the Roma Lido railway line (€6,544 thousand), partly offset by lower costs for work on the infrastructure of Umbria (€9,434 thousand) and lower costs for the construction of noise dampening barriers for BBT (€3,577 thousand);
- the €2,985 thousand decrease in costs for contracted cleaning and other services, mainly due to the lower costs for: other contracted cleaning and sanitising services as it was no longer necessary to measure people's temperature and carry out extraordinary cleaning to prevent the spread of Covid-19 (€1,075 thousand): plant cleaning (€3,268 thousand); ice scraping and snow removal (€491 thousand), offset by the increases in costs for: assistance services to passengers with reduced mobility (€787 thousand) as the volumes of these services returned to pre-pandemic levels; upkeep (€654 thousand); contracted station services (€401 thousand) and waste disposal and sewage treatment (€7 thousand);
- the €6,037 thousand decrease in costs for maintenance and repair of movable and immovable property, mostly due to the drop in non-recurring repairs following natural disasters (€5,132 thousand);
- the €6,564 thousand increase in property services and utilities due to the sharp spike in the price of energy with an impact on utilities and building expenses in general;
- the €15,217 thousand increase in administrative and IT services, substantially relating to the jump in IT services (€6,432 thousand) following the ransomware cyber attack in March 2022, the rise in ongoing IT services (€5,950 thousand) and the recalculation of the contractual annual fee for cybersecurity services (€2,350 thousand). On the other hand, administrative services increased only slightly (€485 thousand);
- the €163 thousand increase in external communications and advertising expense;
- the €6,289 thousand decrease in costs for other sundry services, mainly due to the combined effect of smaller accruals/releases (€20,310 thousand) due to the favourable outcome of disputes in and out of court during the year, lower Polfer (railway police) costs (€1,407 thousand), higher service cost reimbursements (€3,086 thousand) and lower company officers' fees (€169 thousand), partly offset by high costs for: travel and accommodation (€6,178 thousand) due to increased trips taken during the year as the Covid-19 restrictions

were relaxed; insurance (€6,269 thousand) following the change in the calculation parameters for the allocation of the single insurance premium; services provided by the parent (€2,340 thousand); other third-party services (€1,115 thousand) and professional services (€1,539 thousand), as well as greater group common costs (€1,251 thousand).

9. Use of third-party assets

This caption can be analysed as follows:

	(€'000)		
	2022	2021	Change
Lease payments, building expenses and IRE	26,311	27,099	(788)
Leases and indemnities for rolling stock and other	12,254	8,231	4,023
IT and other services	110	127	(17)
Total	38,675	35,457	3,218

Use of third-party assets shows an overall increase of €3,218 thousand on the previous year, mostly due to carriage hire.

10. Other operating costs

This caption can be analysed as follows:

	(€'000)		
	2022	2021	Change
Other costs	44,577	48,389	(3,812)
Local taxes and duties	42,379	37,800	4,579
Losses	311	219	92
Accruals/releases	6	(200)	206
Total	87,273	86,208	1,065

Other operating costs rose slightly by €1,065 thousand, mainly as a consequence of higher taxes and duties.

11. Internal work capitalised

This caption amounts to €940,608 thousand and refers to internal costs for the use of personnel and overheads of €459,256 thousand and costs for materials used in investments of €481,352 thousand, in line with the use of such materials.

The decrease in assets capitalised in 2022 compared to the previous year, down by €91,162 thousand, is attributable to the postponement of certain negotiations to 2023.

Furthermore, a few large projects experienced work slowdowns, which are expected to be recovered in 2023.

12. Ammortisation and depreciation

This caption can be analysed as follows:

	(€'000)		
	2022	2021	Change
Amortisation of intangible assets	3,795	3,513	282
Depreciation of property, plant and equipment	129,950	104,620	25,330
Depreciation of investment property	3,225	2,613	612
Total	136,970	110,746	26,224

The increase in this caption on 2021 is mainly due to the change in rates based on the train-km.

13. Impairment losses

This caption can be analysed as follows:

	(€'000)		
	2022	2021	Change
Net impairment losses on intangible assets	1,187	1,346	(159)
Net impairment losses on property, plant and equipment	2,199	58,110	(55,911)
Net impairment losses on loans and receivables	98,076	9,657	88,419
Net fair value gain (losses) on cash and cash equivalents	441	237	204
Total	101,903	69,350	32,553

This caption increased by €32,553 thousand on 2021, mainly due to:

- greater impairment losses on loans and receivables (+€88,419 thousand);
- smaller impairment losses on property, plant and machinery (-€55,911 thousand).

14. Provisions

This caption decreased by €30,000 thousand as a result of the release of the provision for income and employment assistance due to an over-accrual.

15. Financial income

This caption can be analysed as follows:

	(€'000)		
	2022	2021	Change
Other financial income	1,641	38,463	(36,822)
Exchange gains	12	21	(9)
Dividends	-	-	-
Total	1,653	38,484	(36,831)

The €36,831 thousand decrease in Other financial income is mainly due to the fact that the company had benefited from the effects of ART decision no. 88/2021 in the previous year (monetary revaluation of assets from the railway companies for prior year adjustments).

16. Financial expense

This caption may be analysed as follows:

	(€'000)		
	2022	2021	Change
Borrowing costs	49,520	35,490	14,030
Impairment losses on financial assets	332	(328)	660
Exchange losses	8	24	(16)
Interest expense on lease liabilities	604	899	(295)
Accruals/releases	–	–	–
Total	50,464	36,085	14,379

Financial expense increased by €14,379 thousand, mainly due to the following factors:

- the €14,030 thousand rise in financial expense on financial liabilities, mostly the combined effect of the higher interest cost (€8,274 thousand) and greater interest expense on mortgage loans (€7,554 thousand) and derivatives (€2,616 thousand) due to the hike in interest rates, offset by the €7,353 thousand drop in other expenses, which included factoring commissions in 2021 (none in 2022);
- the €660 thousand increase in impairment losses on financial assets, mainly due to the application of IFRS 9;
- the €16 thousand decrease in exchange losses;
- the €295 thousand decrease in interest expense on lease liabilities due to the application of IFRS 16.

Capitalised financial expense was determined based on the portion of financing allocated to assets under construction and amounts to €3,967 thousand.

17. Current and deferred taxes

The company's tax burden is nil as a result of higher tax deductible expenses which give rise to a negative tax base (loss). The most significant decrease in this respect consists of fiscally-driven depreciation in excess of depreciation for accounting purposes.

The following table provides a breakdown of the depreciable cost used for tax purposes which, following the application of the specific IFRS-compliant provisions set out in article 1.86/87 of Law no. 266/2005, is shown gross of the corresponding government grants related to assets given to the railway infrastructure operator.

	(€'000)
	2022
Depreciable cost under Italian Civil Code criteria	5,055,196
Government grants related to assets up to 2022	56,325,820
Government grants related to assets for 2022 extraordinary maintenance	2,968,127
Government grants related to assets up to 2060	35,697,614
Impairment loss as per IFRS, reducing the historical cost	3,571,765
Total depreciable cost under tax criteria	103,618,522
Total fiscally-driven portion	2,488,237

STATEMENT OF FINANCIAL POSITION**18. Property, plant and equipment**

The table below shows the opening and closing balances of property, plant and equipment and changes in the year. It also shows changes in Historical cost, Depreciation and impairment losses and Grants. The balance of extraordinary maintenance refers to extraordinary maintenance expense incurred and capitalised and, hence, subject to depreciation.

Placement in service mainly refers to technological work while progress of investments refers to large infrastructure projects, investments in maintaining the efficiency of infrastructure and widespread work throughout the country. For additional information, reference should be made to the "Investments" section of the directors' report.

Depreciation amounts to €129,950 thousand, of which €15,511 thousand relates to right-of-use assets (IFRS 16).

(€'000)

	Land, buildings and railway and port infrastructure	Leasehold improvements	Plant and machinery	Industrial and commercial equipment	Other assets	Assets under construction and payments on account	Extraordinary maintenance	Total
Historical cost	109,982,147	209,578	557,702	1,120,520	383,531	23,925,959	2,618,067	138,797,504
Depreciation and impairment losses	(23,873,915)	(67,064)	(250,308)	(362,600)	(219,722)	(1,562,242)	–	(26,335,851)
Grants	(55,541,093)	(77,947)	(208,588)	(620,320)	(83,970)	(18,466,983)	(2,618,067)	(77,616,968)
Balance at 31.12.2021	30,567,140	64,568	98,805	137,601	79,838	3,896,733	–	34,844,685
Investments	32,625	–	–	–	481	4,250,600	1,563,486	5,847,192
Placement in service	4,116,497	19,790	56,935	126,659	11,213	(3,117,668)	(1,213,426)	–
Depreciation	(114,807)	(269)	(2,505)	(3,308)	(9,061)	–	–	(129,950)
Impairment losses	–	–	–	–	–	(1,130)	–	(1,130)
Change in grants	(4,082,945)	(64,513)	(61,124)	(126,318)	(11,098)	(1,183,252)	(350,060)	(5,879,310)
<i>Increases for advances</i>	–	–	–	–	–	(4,264,732)	(1,563,486)	(5,828,218)
<i>Placement in service</i>	(4,039,211)	(19,790)	(56,926)	(126,317)	(11,099)	3,039,917	1,213,426	–
<i>Reclassifications</i>	(43,734)	(44,723)	(4,198)	(1)	1	41,563	–	(51,092)
Disposals and divestments	(3,584)	–	(1)	(649)	(90)	(326)	–	(4,650)
<i>Decreases in historical cost due to disposals and divestments</i>	(48,310)	–	(84)	(4,228)	(4,500)	(326)	–	(57,448)
<i>Decreases in accumulated depreciation due to divestments</i>	34,109	–	83	2,338	3,518	–	–	40,048
<i>Decreases in grants due to other divestments</i>	605	–	–	1,070	798	–	–	2,473
<i>Decreases in impairment gains/losses due to divestments</i>	10,012	–	–	171	94	–	–	10,277
Other reclassifications	40,899	48,881	4,198	(54)	(3)	28,211	–	122,132
<i>Changes in historical cost due to other reclassifications</i>	(32,763)	49,462	(5,416)	(54)	(7)	28,211	–	39,433
<i>Changes in accumulated depreciation due to reclassifications</i>	8,941	(495)	–	–	–	–	–	8,446
<i>Changes in impairment gains/losses due to reclassifications</i>	64,721	(86)	9,614	–	4	–	–	74,253
Total changes	(11,315)	3,889	(2,497)	(3,670)	(8,558)	(23,565)	–	(45,716)
Historical cost	114,050,196	278,831	609,137	1,242,897	390,718	25,086,774	2,968,127	144,626,680
Depreciation and impairment losses	(23,870,939)	(67,914)	(243,116)	(363,399)	(225,167)	(1,563,372)	–	(26,333,907)
Grants	(59,623,433)	(142,460)	(269,713)	(745,567)	(94,271)	(19,650,234)	(2,968,127)	(83,493,804)
Balance at 31.12.2022	30,555,825	68,457	96,308	133,931	71,280	3,873,168	–	34,798,969

Grants related to assets

In 2022, grants related to assets totalling €5,828,218 thousand were allocated to assets under construction, including €1,227,818 thousand from the European Union and local bodies and €4,600,400 thousand from the government. They mainly comprise:

- €4,550,642 thousand as advances for grants from the MEF for infrastructure investments;
- €49,757 thousand as advances for grants from the MIT for infrastructure investments.

19. Right-of-use assets

Changes in right-of-use assets can be analysed as follows.

	(€'000)			
	Land, buildings, railway and port infrastructure	Plant and machinery	Other assets	Total
Historical cost	45,236	176	33,965	79,376
Accumulated depreciation	(22,086)	(67)	(17,775)	(39,928)
Balance at 01.01.2022	23,150	108	16,190	39,448
Investments (new leases)	28,916	–	481	29,397
Amortisation and depreciation	(7,942)	(29)	(7,540)	(15,511)
Disposals and divestments	–	–	–	–
<i>Historical cost</i>	<i>20,473</i>	<i>–</i>	<i>2,820</i>	<i>23,293</i>
<i>Accumulated depreciation</i>	<i>(20,473)</i>	<i>–</i>	<i>(2,820)</i>	<i>(23,293)</i>
Other changes	–	–	–	–
Total changes	20,974	(29)	(7,059)	13,886
Historical cost	53,678	176	31,627	85,480
Depreciation and impairment losses	(9,554)	(96)	(22,496)	(32,146)
Balance at 31.12.2022	44,124	80	9,131	53,334

Lease liabilities and the related changes of the year are shown below.

	(€'000)
Changes in lease liabilities	2022
Opening balance	40,259
Recognition of new right-of-use assets	29,397
Recognition of interest expense	604
Payments	16,222
Other changes	–
Closing balance	54,038

The following table shows the impacts on profit or loss:

	(€'000)
Impacts on profit or loss	2022
Depreciation of right-of-use assets	15,511
Interest expense on lease liabilities	604
Leases outside the scope of IFRS 16	38,565
Total impacts on profit or loss	54,680

Extension/termination options

Property leases include extension/termination options. At the commencement date of a lease, the company assesses whether it is reasonably certain to exercise that option and reassesses them whenever a significant event or significant change in circumstances under its control occurs.

Based on this assessment, RFI concluded that it was reasonably certain that the lease of Villa Patrizi would be extended.

The table below shows potential future lease payments:

(€'000)		
Recognised lease liabilities	Potential future lease payments	Rate at which lease extension/termination options have been exercised in the past
54,038	31,936	50%

Lessor

The table below includes an ageing analysis of payments to be received in future years for assets that the company has given under operating lease:

	(€'000)						
	Within one year	1-2 years	2-3 years	3-4 years	4-5 years	After 5 years	TOTAL
Undiscounted payments to be received for operating leases	115,113	108,786	113,144	116,876	119,933	122,375	696,227

20. Investment property

The opening and the closing balances of investment property are given below:

(€'000)

	2022				2021			
	Land	Buildings	Assets under construction and payments on account	TOTAL	Land	Buildings	Assets under construction and payments on account	TOTAL
Balance at 1 January								
Historical cost	1,505,529	1,775,750	9,539	3,290,817	1,527,852	1,677,322	25,625	3,230,799
Accumulated depreciation	-	(545,124)	-	(545,124)	-	(541,066)	-	(541,066)
Grants	(20,261)	(368,575)	(1,506)	(390,341)	(19,731)	(298,884)	(4,274)	(322,889)
Net impairment losses	(1,020,081)	(235,192)	(288)	(1,255,561)	(1,031,989)	(235,833)	-	(1,267,822)
Carrying amount	465,187	626,859	7,745	1,099,791	476,132	601,539	21,351	1,099,022
Changes of the year								
Acquisitions (placement in service)	3,395	120	16,032	19,546	489	29,980	(18,311)	12,158
Placement in service	3,012	29,826	(32,837)	-	-	-	-	-
Reclassifications	3,885	(5,150)	1,181	(84)	(8,352)	26,795	(23,519)	(5,077)
<i>Changes in historical cost</i>	4,644	(73,674)	17,816	(51,214)	(10,361)	70,474	2,225	62,337
<i>Changes in accumulated depreciation</i>	-	(8,397)	-	(8,397)	-	(2,225)	-	(2,225)
<i>Changes in grants</i>	(1,015)	89,502	(16,635)	71,852	(59)	(41,710)	(25,744)	(67,512)
<i>Changes in impairment gains/losses</i>	256	(12,580)	-	(12,325)	2,067	256	-	2,323
Disposals and divestments	(5,506)	(706)	-	(6,211)	(2,611)	(801)	-	(3,412)
<i>Decreases in historical cost</i>	(6,108)	(2,089)	-	(8,197)	(12,451)	(2,026)	-	(14,477)
<i>Decrease in accumulated depreciation</i>	-	1,198	-	1,198	-	779	-	779
<i>Decreases in grants</i>	-	15	-	15	-	59	-	59
<i>Decreases in impairment gains/losses</i>	602	170	-	772	9,840	386	-	10,226
Increases/decreases due to impairment gains/losses	-	-	-	-	-	-	(288)	(288)
Change in grants	(3,012)	(13,624)	16,635	-	(471)	(28,041)	28,512	-
Depreciation	-	(3,226)	-	(3,226)	-	(2,613)	-	(2,613)
Total changes	1,775	7,240	1,010	10,025	(10,946)	25,320	(13,606)	770
Balance at 31 December								
Historical cost	1,510,472	1,729,933	10,549	3,250,954	1,505,529	1,775,750	9,539	3,290,817
Accumulated depreciation	-	(555,550)	-	(555,550)	-	(545,124)	-	(545,124)
Grants	(24,287)	(292,682)	(1,506)	(318,474)	(20,261)	(368,575)	(1,506)	(390,341)
Net impairment losses	(1,019,223)	(247,602)	(288)	(1,267,114)	(1,020,081)	(235,192)	(288)	(1,255,561)
Carrying amount	466,962	634,099	8,755	1,109,816	465,187	626,859	7,745	1,099,791

21. Intangible assets

The table below shows the opening and closing balances of intangible assets and changes in the year.

	(€'000)			
	Development expenditure	Concessions, licences, trademarks and similar rights	Assets under development and payments on account	Total
Historical cost	127,943	573,437	670,241	1,371,621
Amortisation and impairment losses	(81,697)	(151,644)	(6,384)	(239,724)
Grants	(26,489)	(287,183)	(18,570)	(332,242)
Balance at 31.12.2021	19,757	134,610	645,287	799,654
Investments/acquisitions	–	–	204,214	204,214
Placement in service	–	24,928	(24,928)	–
Amortisation	(474)	(3,321)	–	(3,795)
Impairment losses	–	–	(1,187)	(1,187)
Changes and grants	–	(24,928)	24,928	–
Disposals and divestments	–	–	–	–
<i>Decreases in historical cost due to disposals and divestments</i>	–	(1)	–	(1)
<i>Decreases in accumulated amortisation due to divestments</i>	–	–	–	–
<i>Decrease in grants</i>	–	1	–	1
Other reclassifications	–	–	(70,955)	(70,955)
<i>Changes in historical cost due to other reclassifications</i>	–	(15)	(45,882)	(45,897)
<i>Changes in accumulated amortisation due to other reclassifications</i>	–	–	–	–
<i>Changes in grants due to other reclassifications</i>	–	–	(25,073)	(25,073)
<i>Changes in impairment gains/losses due to reclassifications</i>	–	15	–	15
Total changes	(474)	(3,321)	132,072	128,277
Historical cost	127,943	598,349	803,645	1,529,937
Amortisation and impairment losses	(82,171)	(154,950)	(7,571)	(244,692)
Grants	(26,489)	(312,110)	(18,715)	(357,314)
Balance at 31.12.2022	19,283	131,289	777,359	927,931

22. Equity investments

The opening and the closing balances of equity investments are broken down by category:

	(€'000)	
	31.12.2022	31.12.2021
Investments in:		
Subsidiaries	87,767	87,767
Associates	7,077	7,077
Other companies	48,930	48,930
Total	143,774	143,774

	Carrying amount 31.12.2021	Changes of the year				Carrying amount 31.12.2022
		Acquisitions/ subscriptions	Impairment losses/ gains	Reclas- sifications	Divestments / repayments	
Investments in subsidiaries						
Blu Jet S.r.l.	200	-	-	-	-	200
Tunnel Ferroviario del Brennero - Società di partecipazioni S.p.A.	48,455	-	-	-	-	48,455
Terminali Italia S.r.l.	9,238	-	-	-	-	9,238
Bluferries S.r.l.	21,229	-	-	-	-	21,229
Grandi Stazioni Rail S.p.A.	3,145	-	-	-	-	3,145
Infrarail S.r.l.	5,500	-	-	-	-	5,500
Investments in associates						
Quadrante Europa Terminal Gate S.p.A.	7,077	-	-	-	-	7,077
Other companies						
Isfort S.p.A.	48	-	-	-	-	48
Stretto di Messina S.p.A. in liquidation	48,882	-	-	-	-	48,882
Total	143,774	-	-	-	-	143,774

	Carrying amount 31.12.2020	Changes of the year				Carrying amount 31.12.2021
		Acquisitions/ subscriptions	Impairment losses/ gains	Reclas- sifications	Divestments / repayments	
Investments in subsidiaries						
Blu Jet S.r.l.	200	-	-	-	-	200
Tunnel Ferroviario del Brennero - Società di partecipazioni S.p.A.	48,455	-	-	-	-	48,455
Terminali Italia S.r.l.	9,238	-	-	-	-	9,238
Bluferries S.r.l.	21,229	-	-	-	-	21,229
Grandi Stazioni Rail S.p.A.	3,145	-	-	-	-	3,145
Infrarail S.r.l.	5,500	-	-	-	-	5,500
Investments in associates						
Quadrante Europa Terminal Gate S.p.A.	7,077	-	-	-	-	7,077
Other companies						
Isfort S.p.A.	48	-	-	-	-	48
Stretto di Messina S.p.A. in liquidation	48,882	-	-	-	-	48,882
Interporto Marche S.p.A.	2	-	-	-	(2)	-
Total	143,776	-	-	-	(2)	143,774

During their extraordinary meeting on 10 November 2022, the quotaholders of Infrarail S.r.l. approved the company's name change from "Infrarail Firenze S.r.l." to "Infrarail S.r.l." and updated its business object and registered office, which had been moved to Roma on 15 January 2022. The changes regarding the company's name and object are effective as of 21 November 2022.

Equity investments, amounting to €143,774 thousand, did not change in the year. Although the company recognised an increase of €140,434 thousand in the cost of the investment in Tunnel Ferroviario del Brennero - Società di partecipazioni S.p.A., it was entirely offset by the greater grants related to assets received from the MEF using chapter 7122 resources and transferred to the subsidiary.

In the following table, the carrying amounts of investments in subsidiaries and associates are compared with the corresponding portions of equity.

								(€'000)
	Registered office	Share/q uota capital	Profit (loss) for the year	Equity at 31.12.2022	% of investment	Attributabl e equity (a)	Carrying amount at 31.12.2022 (b)	Difference (b) - (a)
Investments in subsidiaries								
Blu Jet S.r.l.	Messina, Via Calabria 1	200	164	1,485	100.00%	1,485	200	(1,285)
Tunnel Ferroviario del Brennero - Società di partecipazioni S.p.A.	Roma, Piazza della Croce Rossa 1	1,165,791	54	1,167,731	90.34%	1,054,951	48,455	(1,006,497)
Terminali Italia S.r.l.	Roma, Piazza della Croce Rossa 1	7,346	2,137	27,722	100.0%	27,722	9,238	(18,484)
Blufferies S.r.l.	Messina, Via Calabria 1	20,100	4,162	44,268	100.0%	44,268	21,229	(23,039)
Grandi Stazioni Rail S.p.A.*	Roma, Via Giolitti 34	4,304	5,888	67,452	100.0%	67,452	3,145	(64,306)
Infrarail S.r.l.	Roma, Piazza della Croce Rossa 1	5,500	(325)	9,831	100.0%	9,831	5,500	(4,331)
Investments in associates								
Quadrante Europa Terminal Gate S.p.A.	Verona, Via Sommacampagna 61	16,876	1	14,166	50.0%	7,083	7,077	(6)

*The company applies IFRS.

											(€'000)
	% of investme nt	Current assets	Non- current assets	Total assets	Current liabilities	Non- current liabilities	Total liabilities	Reven ue	Costs	Profit/ (loss)	
31.12.2022											
Investments in associates											
Quadrante Europa Terminal Gate S.p.A.	50.00%	1,412	15,711	17,124	947	2,011	2,958	1,206	1,205	1	
31.12.2021											
Investments in associates											
Quadrante Europa Terminal Gate S.p.A.	50.00%	1,202	16,221	17,423	940	2,318	3,258	1,169	1,193	(24)	

23. Non-current and current financial assets (including derivatives)

Financial assets are broken down below:

(€'000)									
Carrying amount									
31.12.2022			31.12.2021			Change			
	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total
Financial assets									
Fifteen-year grants from the MEF	95,194	9,999	105,193	-	-	-	95,194	9,999	105,193
Loans	51,448	-	51,448	71,880	-	71,880	(20,432)	-	(20,432)
Other loans	-	419,228	419,228	-	148,181	148,181	-	271,047	271,047
Securities	489	-	489	609	-	609	(120)	-	(120)
Derivatives	-	1,512	1,512	-	-	-	-	1,512	1,512
Gross financial assets	147,131	430,739	577,870	72,489	148,181	220,670	74,642	282,558	357,200
Loss allowance	(139)	(330)	(469)	(158)	(100)	(258)	19	(230)	(211)
Total financial assets	146,992	430,409	577,401	72,331	148,081	220,412	74,661	282,328	356,989

The €105,193 thousand increase in assets from the MEF is mainly due to grants pursuant to article 25.1 of Decree law no. 4/2022, converted with Law no. 25 of 28 March 2022, which allocated a total of €130 million to RFI for the period between January and March 2022, with cash disbursements of €10 million per year from 2022 to 2034.

Securities include the Webuild (former Astaldi) securities at fair value (€489 thousand).

Non-current loans of €51,448 thousand mainly relate to the restricted current accounts with Unicredit (€45,331 thousand) and BNL (€4,659 thousand). The amounts are generally restricted following attachment by third party suppliers as a result of unhonoured orders/injunctions to pay.

The €271,047 thousand increase in Other loans is due to the current portion of this caption and refers to the rise in the amount due from the parent for the intragroup cash pooling account.

24. Other current and non-current assets

They may be analysed as follows:

(€'000)									
31.12.2022			31.12.2021			Change			
	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total
Other assets from group companies	14,764	96,678	111,442	15,038	25,448	40,486	(274)	71,230	70,956
VAT assets	9	65	74	9	43	52	-	22	22
MEF and MIT	3,169,809	862,381	4,032,190	2,636,519	1,135,909	3,772,428	533,290	(273,528)	259,762
Grants related to assets from the EU, other Ministries and other	-	7,754	7,754	-	14,261	14,261	-	(6,507)	(6,507)
Other government authorities	-	536,259	536,259	-	211,191	211,191	-	325,068	325,068
Sundry assets	3,559	110,051	113,610	4,122	108,873	112,995	(563)	1,178	615
Prepayments and accrued income	-	5,189	5,189	-	3,663	3,663	-	1,526	1,526
Total	3,188,141	1,618,376	4,806,517	2,655,688	1,499,388	4,155,076	532,453	118,988	651,441
Loss allowance	(2,021)	(121,658)	(123,679)	(1,808)	(35,823)	(37,631)	(213)	(85,835)	(86,048)
Total other assets	3,186,120	1,496,719	4,682,839	2,653,880	1,463,565	4,117,445	532,240	33,154	565,394

The net increase of €70,956 thousand in Other assets from group companies is substantially due to:

- the €77,417 thousand increase in assets from the parent arising from the 2017 programme agreement with the Milano municipal authorities;

- the €3,663 thousand increase in assets from related companies mainly in connection with the performance regime;
- the €10,143 thousand reduction in the VAT asset from the parent.

The amounts due from the MEF and the MIT at 31 December 2022 are analysed below:

	(€'000)			
	31.12.2021	Increases	Decreases	31.12.2022
Grants related to income:				
- MEF: chap. 1541	–	1,155,557	(1,155,557)	–
- MIT: chap. 7255	3,860	7,100	(2,440)	8,520
- MIT: chap. 1300	–	15,000	(15,000)	–
Grants related to freight:				
- MIT: chap. 1274 - 7302	19,103	100,000	(104,301)	14,802
Grants related to assets and investments:				
- MEF: chap. 7122-7123-8000	3,131,254	5,153,291	(4,927,682)	3,356,863
- MIT: chap. 7060-7514-7515-7518-7528-7540-7532-7549-7561-7550 - 1274-7505-7506-7006	618,211	118,505	(84,711)	652,005
Total	3,772,428	6,549,453	(6,289,691)	4,032,190

During the year, the caption rose by a net €259,762 thousand due to the combined effect of the following factors:

- the recognition of new grants related to income, goods, assets and investments of €6,549,453 thousand, broken down as follows:
 - €1,155,557 thousand granted using the chapter 1541 funds of the MEF in accordance with Law no. 234 of 30 December 2021 (the 2022 Budget Act);
 - grants related to freight of €100,000 thousand pursuant to article 1.294 of Law no. 190/2014, allocated to the MIT with article 11.2-ter of Decree law no. 185 of 25 November 2015 to be transferred to the railway companies for 2022;
 - €7,100 thousand using chapter 7255 funds earmarked for “passenger maritime transport in the Stretto di Messina”, services that RFI provided in 2022 through the subsidiary Blu Jet S.r.l.;
 - €15,000 thousand using the funds allocated by article 9.6 of Decree law no. 115 of 9 August 2022, converted with Law no. 142 of 21 September 2022 to mitigate the negative economic repercussions of the exceptional surge in the cost of energy on the rail freight sector;
 - grants related to assets of €5,153,291 thousand (MEF chapters), of which:
 - €230,240 thousand (chapter 7122 – Management Programme 1 (“MP1”)), allocated under article 1.176 of Law no. 228/2012 (2013 Stability Act) and refinanced by Law no. 190/2014 (2015 Stability Act);
 - €1,968,615 thousand (chapter 7122 – MP2), allocated under the 2022 Budget Act for 2022, including €100,000 thousand from the 2022 vertical reformulation;
 - €26,168 thousand relating to the recognition of additional amounts for grants related to assets from the MEF financed by the resources allocated by chapter 7122 of the MP4;

-
- €410,000 thousand (chapter 7122 – MP7) for 2022, allocated under article 1.76 of Law no. 147/2013 (2014 Stability Act), for the Brescia Verona Padova-Apice Orsara line, and refinanced by Law no. 190/76 (2015 Stability Act), of which €310,000 thousand using the 2022 allocation pursuant to the Budget Act and €100,000 thousand related to the 2022 vertical reformulation;
 - €50,000 thousand pursuant to Decree law no. 59 of 6 May 2021 (chapter 7122 - MP13) to finance work on the HS/HC Salerno-Reggio Calabria line;
 - €1,559,467 thousand (chapter 7122 – MP5), of which €550,000 thousand for 2022 under the 2022 Budget Act for extraordinary maintenance, €550,000 thousand from the 2022 allocation and €1,009,467 thousand from the resources allocated for the 2023-2025 three-year period.
 - €193,066 thousand following the recognition of additional grants related to assets from the MEF (chapter 7122 - MP7) for the 2023-2025 three-year period to finance the work performed in 2022;
 - €190,000 thousand following the recognition of additional grants related to assets from the MEF (chapter 7122 - MP10) for the 2023-2025 three-year period to finance the work performed in 2022;
 - €442,335 thousand following the recognition of additional grants related to assets from the MEF (chapter 7122 - MP11) for the 2023-2025 three-year period to finance the work performed in 2022;
 - €83,400 thousand following the recognition of additional grants related to assets from the MEF (chapter 7122 - MP12) for the 2023-2025 three-year period to finance the work performed in 2022;
 - €30,000 thousand (MIT chapter 7505) financed by the resources allocated by Decree law no. 59 of 6 May 2021, containing "Emergency measures relating to the Complementary Fund to the National Recovery and Resilience Plan and other emergency measures for investments", converted, with amendments, by Law no. 101 of 1 July 2021, for the updating of the fleet, buses and green ships;
 - €35,000 thousand (MIT chapter 7506) financed by the resources allocated by Decree law no. 59 of 6 May 2021, containing "Emergency measures relating to the Complementary Fund to the National Recovery and Resilience Plan and other emergency measures for investments" for railway bypass projects;
 - €34,000 thousand financed by chapter 7561 and assigned to RFI under the MIT/MEF decree dated 7 December 2020;
 - €4,748 thousand (chapter 7006) financed by the fund for the price adjustment of construction materials pursuant to article 1-septies.8 of Decree law no. 73/2021;
 - €14,757 thousand (chapter 7007) financed by the fund for the continuation of public works provided for by article 7.1 of Decree law no. 76/2020;
 - decreases due to collections of €6,289,691 thousand, broken down as follows:
 - €1,155,557 thousand (MEF chapter 1541 – grants related to income);
 - €2,440 thousand using chapter 7255 funds earmarked for "passenger transport in the Messina Strait";
 - grants related to freight of €99,900 thousand financed by article 1.294 of Law no. 190/2014, allocated to the MIT with article 11.2-ter of Decree law no. 185 of 25 November 2015 to be transferred to the railway companies for 2022;

- €4,927,682 thousand (MEF chapter 7122) for various management programmes (MP1-MP2-MP4-MP5-MP6-MP7-MP11-MP12-MP13-MP15);
- €4,748 thousand (MIT chapter 7006) financed by the fund for the price adjustment of construction materials pursuant to article 1-septies.8 of Decree law no. 73/2021 for applications submitted in the first half of 2022;
- €4,401 thousand financed by chapter 7302 for the updating of freight carriage braking systems;
- €14,757 thousand (chapter 7007) financed by the fund for the continuation of public works provided for by article 7.1 of Decree law no. 76/2020;
- €15,000 thousand financed by the resources allocated under article 9.6 of Decree law no. 115 of 9 August 2022, converted with Law no. 142 of 21 September 2022;
- €54,527 thousand financed by the resources allocated by Law no. 164/2014 for the "Upgrading of the Monaco-Verona rail link: Brennero Base Tunnel - Construction Lot III" (chapter 7528);
- €10,677 thousand financed by the resources under article 32.1 of Decree law no. 98/2011, converted into Law no. 111/2011, allocated to RFI with CIPE resolution no. 85/2011 under chapter 7515 "Milano-Verona HS/HC line - Treviglio-Brescia section" – Construction Lot II.

Other government authorities increased by €325,068 thousand substantially due to the rise in the amounts due from CSEA (Energy and environmental service fund) as a result of the increase in energy prices compared to the previous year.

Grants related to assets - EU, other Ministries and ordinary customers of €7,754 thousand include the grants received from the European Union, other Ministries and other bodies.

Sundry assets and prepayments and accrued income may be analysed as follows:

	(€'000)		
Sundry assets and prepayments and accrued income	31.12.2022	31.12.2021	Change
Advances to suppliers for current services	47,778	49,428	(1,650)
Personnel	5,867	5,953	(86)
Social security institutions	2,167	4,187	(2,020)
Assets under recovery procedures	1,374	497	877
Insurance compensation from insurance companies	289	288	1
Other non-trade assets	56,135	52,642	3,493
	113,610	112,995	615
Prepayments and accrued income	5,189	3,663	1,526
Total	118,799	116,658	2,141

The €2,141 thousand increase in Sundry assets and prepayments and accrued income is mainly the combined effect of the growth in both other non-trade assets (€3,493 thousand) and prepayments and accrued income (€1,526 thousand), partly offset by the decrease in assets from social security institutions (€2,020 thousand), substantially due to the recognition of smaller assets from INAIL, and the drop in advances to suppliers (€1,650 thousand).

The increase in other non-trade assets (€3,493 thousand) mostly refers to the greater performance regime assets with third parties (€2,045 thousand), the recognition of a tax credit on electricity and natural gas consumption

which accrued in the second quarter of 2022 under Decree law no. 21/2022 (€1,029 thousand) and larger foreign VAT assets (€343 thousand).

The following table gives a breakdown of other non-current and current assets by geographical segment:

	31.12.2022	31.12.2021	Changes
Italy	4,802,018	4,149,561	652,457
Eurozone countries	1,829	1,226	603
United Kingdom	92	90	2
Other non-EU European countries	2,578	4,199	(1,621)
	4,806,517	4,155,076	651,441

25. Inventories

This caption can be analysed as follows:

	31.12.2022	31.12.2021	Change
			(€'000)
Raw materials, consumables and supplies	871,325	864,094	7,231
Allowance for inventory write-down	(14,182)	(14,818)	636
Total inventories	857,143	849,276	7,867

The net increase in raw materials, consumables and supplies amounts to €7,867 thousand and is mainly due to the combined effect of the following:

- the purchase of materials (€504,155 thousand);
- the use of materials (€600,722 thousand);
- the production output at the national workshops of Bari, Pontassieve and Bologna for the production of frogs, switches, glued insulating joints and electric devices (€103,798 thousand);
- the net decrease of €636 thousand in the allowance for inventory write-down due to the analysis of low-use and/or obsolete materials.

26. Non-current and current trade receivables

They can be analysed as follows:

	(€'000)								
	31.12.2022			31.12.2021			Change		
	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total
Ordinary customers*	82	461,827	461,909	175	436,478	436,653	(93)	25,349	25,256
Government and other public authorities	1,539	48,979	50,518	1,572	59,785	61,357	(33)	(10,806)	(10,839)
Foreign railways	-	432	432	-	522	522	-	(90)	(90)
Railways under concession	-	3	3	-	3	3	-	-	-
Contract assets for contract work in progress	-	89,323	89,323	-	53,421	53,421	-	35,902	35,902
Group companies	-	458,633	458,633	-	622,526	622,526	-	(163,893)	(163,893)
Gross trade receivables	1,621	1,059,197	1,060,818	1,747	1,172,735	1,174,482	(126)	(113,538)	(113,664)
Loss allowance	(1)	(149,527)	(149,528)	(2)	(137,977)	(137,979)	1	(11,550)	(11,549)
Total	1,620	909,670	911,290	1,745	1,034,758	1,036,503	(125)	(125,088)	(125,213)

*2021 financial assets arising from service concession arrangements have been reclassified to present them properly

The €25,256 thousand increase in trade receivables from ordinary customers on the previous year end, gross of the related loss allowance, is mainly due to the following factors:

- the increase in invoices issued (€83,503 thousand), following new invoices to third-party railway companies in Italy and abroad for the contract to use the railway infrastructure (roughly €62,000 thousand) and to mobile telephone service operators and electricity transmission operators (around €17,519 thousand);
- the decrease in invoices to be issued (€68,331 thousand) because of the smaller adjustments benefiting RFI and greater accruals for credit notes compared to 2021.

The €10,839 thousand decrease in amounts due from the government and other public authorities, before the related loss allowance, is mainly the combined effect of smaller trade receivables from the Palermo municipal authorities as a result of collections (around €15,000 thousand) and higher trade receivables from the Toscana regional authorities and the Civitavecchia port authority due to new invoices issued (approximately €4,000 thousand).

Trade receivables from group companies decreased by a net €163,893 thousand mainly due to the following factors:

- the €163,071 thousand decrease in trade receivables from related companies mostly because of the collection of fees invoiced to Trenitalia arising from the recalculation of the infrastructure access fee for 2014-2015 as per ART decision no. 88/2021;
- the €1,937 thousand increase in trade receivables from subsidiaries due to the adjustment for the concession fee to be invoiced to the subsidiary GS Rail;
- the €3,138 thousand decrease in assets from the parent, mainly following the collection of invoices for work performed on behalf of Fondazione FS Italiane at the depot for historic rolling stock in La Spezia Migliarina and the recharging of expenses for seconded personnel.

Contract assets amounting to €89,323 thousand reflect the amount due from customers for construction contracts in progress. The €35,902 thousand increase on 31 December 2021 is essentially due to the continuation of contract work in progress relating to internal orders in excess of invoices issued.

In order to show the progress of work considering the amounts already invoiced for contract assets, this caption should be considered together with the corresponding portion included under contract liabilities. The €17,667 thousand balance, which increased by €4,090 thousand, is mainly due to the fact that advances for contract work in progress related to internal orders exceed invoices issued.

Contract assets and liabilities*	31.12.2022		31.12.2021	
	Assets	Liabilities	Assets	Liabilities
Contract work in progress	288,826	32,070	242,992	38,720
Progress payments from customers	(199,503)	(49,737)	(189,571)	(52,297)
Total	89,323	(17,667)	53,421	(13,577)

*Amounts are shown gross of the loss allowance

The maximum exposure to credit risk, broken down by geographical segment, is as follows:

	(€'000)		
	31.12.2022	31.12.2021	Change
Italy	1,055,678	1,170,261	(114,583)
Eurozone countries	2,635	2,382	253
United Kingdom	1	1	0
Other European countries (non-Euro EU)	15	23	(8)
Other non-EU European countries	2,472	1,798	674
Other countries	17	17	0
	1,060,818	1,174,482	(113,664)

27. Current financial assets arising from service concession arrangements

This caption decreased by €7,208 thousand on the previous year end following the collection of invoices issued for construction/improvement works on the lines operated under concession from the Umbria region.

28. Cash and cash equivalents

They can be analysed as follows:

	(€'000)		
	31.12.2022	31.12.2021	Change
Bank and postal accounts	3,059	3,696	(637)
Cash and cash on hand	472	465	7
Treasury current accounts	1,459,834	707,931	751,903
Other	112	112	-
Gross balance	1,463,477	712,204	751,273
Loss allowance	(922)	(480)	(442)
Total net of the loss allowance	1,462,555	711,724	750,831

The overall increase in the caption on 31 December 2021 is substantially due to the rise in the treasury current account which receives the payments made by the MEF in relation to the Government Programme Contract and those related to other grants disbursed by the MIT and the European Commission and subsequently transferred to the intragroup current account in accordance with cash needs. For information on the reasons underlying changes in cash and cash equivalents, reference should be made to the statement of cash flows.

Furthermore, attachments were notified to banks without generating availability restrictions (labour disputes), totalling €11,998 thousand, in addition to attachments which qualify as "restricted amounts on bank and postal accounts" of €2,205 thousand.

29. Tax assets

The €310 thousand balance is essentially in line with the previous year.

30. Equity

Changes in the main equity captions in 2022 are shown in the statement of changes in equity to which reference should be made.

Share capital

At 31 December 2022, the company's fully subscribed and paid-up share capital is made up of 31,528,425,067 ordinary shares with a nominal amount of €1 each, for a total of €31,528,425,067.

Legal reserve

At 31 December 2022, it amounts to €114,374 thousand, following the allocation of a portion of the profit for 2021, equal to €13,732 thousand.

Other reserves

The extraordinary reserve amounts to €73,859 thousand and is unchanged compared to the previous year end balance.

Fair value reserves

Hedging reserve

The hedging reserve includes the effective portion of the cumulative net change in the fair value of cash flow hedges relating to transactions that have not yet taken place and the residual portion of the cumulated reserve with previous financial instruments in relation to which, in 2012, the counterparties exercised the contractually-permitted early termination option.

At 31 December 2022, this reserve was negative by €2,529 thousand, up by €11,035 thousand on 31 December 2021. The improvement is due to the following factors:

- the fair value measurement of hedging instruments at the reporting date (improvement of €5,941 thousand);
- the release of the portion of the year following the above-mentioned early termination of contracts in 2012 (improvement of €5,094 thousand);

Actuarial reserve

The actuarial reserve includes the effects of actuarial gains and losses on post-employment benefits and the Free Travel Card. The net balance of this reserve is a negative €127,635 thousand at the reporting date, compared to the previous year-end balance following the actuarial loss of €39,473 thousand.

Retained earnings

At 31 December 2022, retained earnings amount to €2,245,760 thousand, a net increase of €110,917 thousand on the previous year end due to the allocation of the profit for 2021 resolved by the shareholder in the meeting of 8 April 2022.

Profit for the year

The company ended the year with a profit of €262,965 thousand.

The origin, availability and distribution of equity captions, as well as any use in the past three years, are shown below.

Origin	Balance at 31.12.2022 (a+b)	Unavailable portion (a)	Possibility of use ***	Available portion (b)	Available portion of (b)	Summary of uses in the past three years**				
						Capital increase	Coverage of losses	Dividends	Other (Demergers)	
Share capital:										
Share capital	31,528,425	31,528,425								-
Income-related reserves:										
Legal reserve	114,374	114,374	B							
Retained earnings *	2,245,760	(65,342)	A, B, C	2,311,102	1,280,746					
Other reserves:										
Hedging reserve	(2,529)	(2,529)								
Actuarial reserve	(127,635)	(127,635)								
Reserve for non- recurring transactions	73,859		A,B,C	73,859	73,859					(4,649)
TOTAL	33,832,254	31,447,293	-	2,384,961	1,354,605	-	-	-	-	(4,649)

* total equity is shown net of the profit for 2022

** 2019-2020-2021

*** A = Capital increase; B = Coverage of losses; C = Dividends

31. Non-current loans and borrowings

(€'000)			
Non-current loans and borrowings	31.12.2022	Carrying amount 31.12.2021	Change
Bank loans and borrowings	488,015	634,567	(146,552)
Loans and borrowings from other financial backers	–	18,750	(18,750)
Loans and borrowings from group companies	1,688,395	1,578,617	109,778
Total	2,176,410	2,231,934	(55,524)

(€'000)			
Current loans and borrowings and current portion of non-current loans and borrowings*	31.12.2022	Carrying amount 31.12.2021	Change
Bank loans and borrowings (current portion)	147,921	160,397	(12,476)
Loans and borrowings from other financial backers (current portion)	18,750	6,250	12,500
Loans and borrowings from group companies (current portion)	398,494	303,477	95,017
Total	565,165	470,124	95,041

* It mainly refers to the current portion of non-current loans and borrowings

(€'000)			
Loans and borrowings	31.12.2022	Carrying amount 31.12.2021	Change
Bank loans and borrowings	635,936	794,964	(159,028)
Loans and borrowings from other financial backers	18,750	25,000	(6,250)
Loans and borrowings from group companies	2,086,889	1,882,094	204,795
Total loans and borrowings	2,741,575	2,702,058	39,517

Bank loans and borrowings (non-current and current) amount to €635,936 thousand and are shown gross of accrued expenses not yet paid (€1,368 thousand). This caption is entirely comprised of liabilities with the European Investment Bank (EIB). The €159,028 thousand decrease on the previous year end refers to the €158,355 thousand reduction due to the principal repaid in 2022 and the €673 thousand decrease in accrued expenses included under the current portion.

Loans and borrowings from other financial backers (non-current and current) amount to €18,750 thousand and are entirely comprised of liabilities with Cassa Depositi e Prestiti (CDP). The €6,250 thousand decrease on 31 December 2021 is due to the principal of the same amount repaid in 2022.

Loans and borrowings from group companies (non-current and current) amount to €2,086,889 thousand and are shown gross of accrued expenses not yet paid (€8,254 thousand). Specifically, they refer to loans and borrowings related to the tranches of the bonds that FS Italiane S.p.A. placed on the market as part of the FS EMTN Programme, in addition to the intragroup loans as part of a bank loan agreement entered into by FS Italiane S.p.A..

In 2022, RFI agreed an intragroup loan of €200 million with the parent to finance projects with positive environmental sustainability impacts, in line with FS Italiane S.p.A.'s Green Bond Framework. Specifically, the proceeds will be used to finance investments for the completion of the HS Torino-Milano-Napoli network.

The €204,795 thousand increase in these liabilities on 31 December 2021 is mainly due to the combined effect of the following factors:

- the €199,858 thousand increase following the new non-current intragroup loan agreed with the parent;
- the €4,937 thousand increase, mostly in accrued expenses (current).

The terms and conditions of non-current loans and borrowings in place, net of accrued interest, are summarised in the table below:

(€'000)

Type of work	Creditor	Currency	Note	Nom. interest rate	Year of maturity	31.12.2022		31.12.2021	
						Nom. amount	Carr. amount	Nom. amount	Carr. amount
HS/HC	EIB 1	€		Fixed	2023	15,454	15,454	45,146	45,146
HS/HC	EIB 2	€		Fixed	2023	21,165	21,165	41,259	41,259
HS/HC	EIB 3	€	(1)	Variable	2024	83,333	83,333	138,889	138,889
HS/HC	EIB 4	€	(3)	Fixed/Var.	2030	238,044	238,044	266,577	266,577
HS/HC	EIB 5	€	(1)	Variable	2025	5,333	5,333	7,111	7,111
HS/HC	EIB 6	€	(2)	Fixed	2032	112,213	112,213	121,452	121,452
HS/HC	EIB 7	€	(3)	Fixed/Var.	2032	159,024	159,024	172,490	172,490
HS/HC	CASSA DEPOSITI E PRESTITI 2	€	(1) (4)	Variable	2023	18,750	18,750	25,000	25,000
						653,317	653,317	817,923	817,923
HS/HC	INTRAGROUP EMTN 6 TR/FS	€	(6)	Fixed	2025	300,000	299,652	300,000	299,531
HS/HC	INTRAGROUP EMTN 9 TR/FS	€	(6)	Variable	2030	200,000	200,000	200,000	200,000
HS/HC	INTRAGROUP EMTN 11 TR/FS	€	(6)	Variable	2029	100,000	99,894	100,000	99,854
HS/HC	INTRAGROUP EMTN 12 TR/FS	€	(6)	Variable	2029	140,000	140,000	140,000	140,000
HS/HC	INTRAGROUP UNICREDIT/FS	€	(6)	Variable	2023	90,000	89,994	90,000	89,928
HS/HC	INTRAGROUP EMTN 15 TR/FS	€	(6)	Fixed	2030	250,000	250,000	250,000	250,000
HS/HC	INTRAGROUP EMTN 20 TR/FS	€	(6)	Fixed	2027	200,000	199,140	-	-
HS/HC and RC	INTRAGROUP UNICREDIT/FS	€		Variable	2024	200,000	199,876	200,000	199,731
HS/HC and RC	INTRAGROUP INTESA/FS	€		Variable	2024	200,000	199,861	200,000	199,666
HS/HC and RC	INTRAGROUP BPM/FS	€		Variable	2024	100,000	99,982	100,000	99,907
						1,780,000	1,778,398	1,580,000	1,578,617
TOTAL						2,433,317	2,431,715	2,397,923	2,396,540
(1) The rate was converted from variable to fixed following a swap hedging the interest rate risk.									
(2) Fixed for each tranche used.									
(3) Fixed for the first three tranches, variable for the subsequent ones.									
(4) Amount transferred by CDP to CPG Società di cartolarizzazione a.r.l. as part of a securitisation transaction carried out in accordance with Law no. 130/1999									
(5) Amount subject to interest rate risk hedging transactions (collars)									
(6) Access fees will guarantee financial coverage									
(7) The loan is linked to the discounting of the fifteen-year grants pursuant to article 1.84 of the 2006 Finance Act.									

The EIB 300 loan includes covenants in line with international practice which require compliance with a number of financial parameters throughout the term of the contract.

Specifically, these parameters refer to:

- the debt/equity ratio which should remain below 30%;
- equity which should be equal to at least €26 billion;
- total assets which should be equal to at least €36.5 billion.

To date, all financial covenants have been complied with.

The table below shows net financial debt at 31 December 2022 compared with that at the previous year end. It improved by €1,045,889 thousand following the €932,963 thousand improvement in the current net financial debt and the €112,926 thousand improvement in net non-current financial debt.

	(€'000)		
Net financial debt	31.12.2022	31.12.2021	Changes
Net current financial (position) debt	(1,320,942)	(387,979)	(932,963)
Treasury current accounts	(1,458,915)	(707,454)	(751,461)
Other financial assets, net	(418,964)	(148,081)	(270,883)
Financial assets from the MEF for the fifteen-year grants	(9,934)	–	(9,934)
Bank loans and borrowings	147,921	160,397	(12,476)
Loans and borrowings from other financial backers	18,750	6,250	12,500
Shareholder loans due within one year	398,494	303,250	95,244
Current lease liabilities (IFRS 16)	11,978	15,458	(3,480)
Other	(10,272)	(17,800)	7,527
Net non-current financial debt	2,071,478	2,184,404	(112,926)
Financial assets from the MEF for the fifteen-year grants	(95,194)	–	(95,194)
Securities and non-current loans and borrowings	(489)	(606)	117
Loans	(51,309)	(71,725)	20,416
Bank loans and borrowings	488,015	634,567	(146,552)
Loans and borrowings from other financial backers	–	18,750	(18,750)
Shareholder loans due after one year	1,688,395	1,578,617	109,778
Non-current lease liabilities (IFRS 16)	42,060	24,801	17,259
Total	750,536	1,796,425	(1,045,889)

The following table shows changes in financial items, indicated separately from those that generated/used cash flows.

	(€'000)							
	Non-monetary effects							
Cash flows generated by/(used in) financing activities	31.12.2021	Monetary items	Change in accruals	Other non-monetary changes	IFRS 16	Fair value change (IFRS 13)	Changes in expected credit loss (IFRS 9)	31.12.2022
Disbursement and repayment of current and non-current loans	2,702,058	29,243	9,623	651				2,741,575
Change in other financial assets	(72,331)	19,851	501	(105,074)		(1,433)	48	(158,438)
Change in other financial liabilities	45,023	(16,223)	–	(169)	30,002	(4,508)		54,125

32. Post-employment and other employee benefits (CLC)

	(€'000)	
	31.12.2022	31.12.2021
Present value of post-employment benefit obligations	300,095	373,653
Present value of Free Travel Card (CLC) obligations	23,338	30,360
Other provisions (maritime doctors, former National Social Security and Welfare Institute for Ferrovie dello Stato employees)	(175)	(178)
Other changes (advance on Italian revaluation tax)		–
Total present value of obligations	323,258	403,835

Changes in the present value of liabilities for defined benefit obligations are shown in the table below.

	(€'000)	
Post-employment benefits and Free Travel Card (CLC)	31.12.2022	31.12.2021
Defined benefit obligations at 1 January	404,013	446,632
<i>Service cost</i>	191	202
<i>Interest cost (*)</i>	5,558	279
Benefits paid	(44,575)	(57,438)
Transfers in (out)	475	371
Other changes (estimated benefit payments)	(2,756)	(4,320)
Net actuarial (gains) losses recognised in equity	(39,473)	18,287
Defined benefit obligations	323,433	404,013
Other provisions (health care trust, former National Social Security and Welfare Institute for Ferrovie dello Stato employees)	(175)	(178)
Other changes		
Post-employment and other employee benefits (CLC)	323,258	403,835

(*) through profit or loss

In accordance with the IFRS, the post-employment benefits accrued up to 1 January 2007 and the Free Travel Cards have been considered defined post-employment-benefits, the amount of which is calculated on an actuarial basis.

In 2022, a total of €46,856 thousand in post-employment benefits was used (benefits paid, transfers in/out, other changes, estimated benefit payments). This refers to the benefits paid to employees who left the company in 2022 and employees' advances and transfers from/to other group companies.

Net actuarial gains of €39,473 thousand were recognised in 2022, compared to net losses of €18,287 thousand in 2021. The actuarial gains are due to the increases in the discount rate from -0.29% in 2021 to 3.57% in 2022 for post-employment benefits and from 0.98% in 2021 to 3.77% in 2022 for the Free Travel Card.

Specifically, the actuarial reports on post-employment benefits and the Free Travel Card show total gains based on financial assumptions (including the discount rate) of approximately €60,770 thousand and total losses based on the other actuarial assumptions of €21,297 thousand, which, summed together, generate a net actuarial gain of €39,473 thousand.

Other provisions include negligible amounts which were not subject to actuarial valuation since they did not meet the requirements of defined benefit obligations set out in IAS 19. Consequently, they were presented separately.

Actuarial assumptions

The main assumptions for the actuarial estimate process are described below:

	31.12.2022	31.12.2021
Discount rate (TFR)	3.57%	0.29%
Discount rate (CLC)	3.77%	0.98%
Future increases in pensions	75% inflation +1.5 percentage points	75% inflation +1.5 percentage points
<i>Expected turnover rate for employees</i>	4.00%	4.00%
Expected rate of advances	2.00%	2.00%
Probability of death	RG48 mortality rate published by the Government General Accounting Office	RG48 mortality rate published by the Government General Accounting Office

The expected mortality assumptions are based on published statistics and mortality rates.

The following sensitivity analysis shows the effects that would have been recorded in terms of changes in the present value of liabilities for defined benefit obligations, following reasonably possible changes in actuarial assumptions. The tables below show the contribution expected for the subsequent year, the average term of the defined benefit obligation and the payments scheduled by the plan.

SENSITIVITY ANALYSIS OF TFR AND CLC		(€'000)	
31.12.2022		TFR	CLC
Turnover rate +1.00%		300,866	
Turnover rate -1.00%		299,263	
Inflation rate +0.25%		302,588	23,729
Inflation rate -0.25%		297,634	22,959
Discount rate +0.25%		296,256	22,873
Discount rate -0.25%		304,034	23,822
Future service cost		–	153
Plan duration (years)		5.9	9
Total employees at year end		29,073	

Estimated future TFR and CLC		(€'000)	
31.12.2022		TFR	CLC
Payment - first year		46,333	2,613
Payment - second year		39,721	2,427
Payment - third year		39,795	2,254
Payment - fourth year		32,260	2,087
Payment - fifth year		12,429	1,989

33. Provisions for risks and charges

The opening and the closing balances of the provisions for risks and charges and changes in 2022 are shown below. The provisions are deemed adequate to cover the company's probable charges.

	(€'000)					
	31.12.2021	Adjustments/ Reclassifications	Accrual	Utilisations	Release of excess provisions	31.12.2022
Provision for taxation	12,009		17		(11)	12,015
Other	647,600	(13,726)	17,644	(35,751)	(141,861)	473,906
TOTAL	659,609	(13,726)	17,661	(35,751)	(141,872)	485,921

Provision for taxation

It includes probable future tax charges.

At 31 December 2022, the provision showed a slight increase (€6 thousand) on 31 December 2021.

Other provisions

This caption refers to the following items which changed as indicated below:

	(€'000)					
	31.12.2021	Adjustments/ Reclassifications	Accrual	Utilisations	Release of excess provisions	31.12.2022
Expense related to						
- personnel	45,801		17,497	(16,003)		47,295
- third parties	221,003		147	(16,091)	(6,863)	198,196
Reclamation	46,187			(3)		46,184
Equity investments	48,882					48,882
Other provisions for risks and charges	285,727	(13,726)		(3,654)	(134,998)	133,349
TOTAL	647,600	(13,726)	17,644	(35,751)	(141,861)	473,906

Provisions for expense related to personnel and third parties

This provision comprises the probable charges in respect of economic and labour claims and compensation for occupational illness. It refers to pending disputes brought before the competent labour courts. In this respect, in 2022, €16,003 thousand was used to cover the contributions charges and costs related to disputes with personnel (in court or out of court). It was increased by €17,497 thousand to meet the needs calculated at 31 December 2022.

The provision for expense related to third parties mainly refers to lawsuits pending with suppliers for subcontracting, services and supplies and the out-of-court dispute for suppliers' claims. In 2022, €16,091 thousand was used following the unfavourable settlement of disputes or settlement agreements, while €6,863 thousand was released.

Reclamation provision

This provision was accrued and used to cover the costs incurred to reclaim sites polluted by works to be sold/that have been sold. The initial calculation of this provision considered the costs to restore the affected areas based on their previous industrial use.

Provision for equity investments

This provision was accrued at 31 December 2013 to cover the investment in Stretto di Messina S.p.A.. It was unchanged in 2022.

Provisions for other risks and charges

These provisions mainly refer to:

- fund for the pursuit of pro-active policies to support income and employment (€97,000 thousand);
- leaving incentives (€10,398 thousand);
- other risks (€25,951 thousand).

The utilisations of €3,654 thousand refer to leaving incentives (€2,402 thousand), the redistribution of the performance regime (€61 thousand) and payments to the heirs of deceased blue collar workers who have joined criminal proceedings no. 2899/2009 before the Avellino Court as aggrieved parties (€1,191 thousand).

34. Non-current and current financial liabilities (including derivatives)

(€'000)									
Carrying amount									
31.12.2022			31.12.2021			Change			
	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total
Financial liabilities									
Hedging derivatives	–	(85)	(85)	4,508	–	4,508	(4,508)	(85)	(4,593)
Other financial liabilities	–	172	172	–	255	255	–	(83)	(83)
Lease liabilities	42,060	11,978	54,038	24,801	15,458	40,259	17,259	(3,480)	13,779
Total financial liabilities	42,060	12,065	54,125	29,309	15,713	45,022	12,751	(3,648)	9,103

The €9,103 thousand increase in financial liabilities (non-current and current) reflects the €13,779 thousand rise in lease liabilities.

The €4,508 thousand decrease in the non-current portion of hedging derivatives is due to the fair value measurement of derivatives at 31 December 2022 (2022 - 2021 FV difference). Specifically, the effect is due to the increase in the hedging reserve due to the fair value measurement of swaps and forward rate agreements.

Financial liabilities measured at fair value are comprised of hedging derivatives and are classified at Level 2, as described in paragraph 37 Financial risk management to which reference should be made. Paragraph 37 also provides a definition of the hierarchy levels used to estimate fair value.

35. Other non-current and current liabilities

	31.12.2022			31.12.2021			Change		
	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total
Advances for grants	–	3,639,554	3,639,554	–	2,414,528	2,414,528	–	1,225,026	1,225,026
Advances to customers	–	–	–	–	–	–	–	–	–
Social security charges payable	12,051	98,508	110,559	18,076	95,343	113,419	(6,025)	3,165	(2,860)
Other liabilities with group companies	–	95,562	95,562	69	64,017	64,086	(69)	31,545	31,476
Sundry liabilities	73,783	376,622	450,405	76,031	335,934	411,965	(2,248)	40,688	38,440
Accrued expenses and deferred income	1,769	15,183	16,952	1,957	9,515	11,472	(188)	5,668	5,480
Total other liabilities	87,603	4,225,429	4,313,032	96,133	2,919,337	3,015,470	(8,530)	1,306,092	1,297,562

At 31 December 2022, advances for grants related to assets amount to €3,639,554 thousand and can be analysed as follows:

	31.12.2021	Increases	Decreases	Other changes	31.12.2022
Advances for grants:					
MEF	819,830	5,153,290	(4,555,736)	(140,434)	1,276,950
MIT	1,373,858	118,507	(49,757)	–	1,442,608
European Regional Development Fund	32,111	152,306	(180,407)	–	4,010
TEN-T network	21,112	45,342	(7,813)	–	58,641
NRRP	–	1,255,152	(675,040)	–	580,112
Other PA	163,536	397,002	(364,557)	–	195,981
Other third parties	4,081	77,171	–	–	81,252
Total advances for grants	2,414,528	7,198,770	(5,833,310)	(140,434)	3,639,554

The net increase of €1,225,026 thousand in advances for grants is due to the combined effect of the increases in amounts due from the MIT, the MEF and other bodies which were recognised under Other non-current and current assets and Non-current and current financial assets, the decreases due to uses through the allocation to assets under construction and the coverage of financial expense, and the €140 thousand net decrease included under Other changes reflecting the capital increases of Società Tunnel Ferroviario del Brennero S.p.A. as described in the note to Equity investments to which reference should be made.

Other liabilities with group companies amount to €95,562 thousand. The €31,476 thousand increase on 31 December 2021 is mainly due to:

- greater liabilities with the parent (€12,347 thousand);
- higher liabilities with other group companies (€19,196 thousand) mostly reflecting the growth in performance regime penalties (€9,596 thousand) and other penalties (€8,822 thousand).

Sundry liabilities mainly refer to amounts due to personnel (€144,884 thousand), guarantee deposits (€43,827 thousand), holidays accrued but not taken (€28,610 thousand), the fund to continue policies to support income and employment (€2,293 thousand), performance regime liabilities (€7,192 thousand) and other penalties (€4,870 thousand), other tax liabilities for withholdings applied by RFI on employees' and contract workers' remuneration

(€37,966 thousand), advances on the 2022 grant related to freight (€15,308 thousand) and liabilities with insurance companies (€15,493 thousand).

36. Non-current and current trade payables

They can be analysed as follows:

	(€'000)								
	31.12.2022			31.12.2021			Change		
	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total
Trade payables	11,509	2,665,312	2,676,821	11,684	2,417,831	2,429,515	(175)	247,481	247,306
Advances	4,986	87,036	92,022	4,900	60,135	65,035	86	26,901	26,987
Trade payables to group companies	-	679,193	679,193	-	573,736	573,736	-	105,457	105,457
Contract liabilities	-	17,667	17,667	-	11,519	11,519	-	6,148	6,148
Total trade payables	16,495	3,449,208	3,465,703	16,584	3,063,221	3,079,805	(89)	385,987	385,898

The increase in current trade payables on the previous year-end balance totals €247,481 thousand and is mainly due to the rise in investments during the year.

Current and non-current advances refer to ordinary customers and group companies (€92,022 thousand), up €26,987 thousand on 31 December 2021.

Current trade payables to group companies increased by a net €105,457 thousand mainly due to the combined effect of the following factors:

- the €71,550 thousand increase in liabilities with the related company Fercredit following factoring by third-party and group suppliers;
- the €16,149 thousand rise in invoices to be received from related companies;
- the €7,925 thousand increase in liabilities with subsidiaries;
- the €14,725 thousand increase in invoices received from related companies;
- the €4,894 thousand decrease in liabilities with the parent.

Contract liabilities of €17,667 thousand reflect the gross amount due to customers for contracts the costs of which, net of recognised profit margins, exceed progress payments. This caption corresponds with Contract assets, to which reference should be made.

37. Financial risk management

The activities that the company carries out expose it to various types of risks that include market risk (interest rate and currency risk), liquidity risk and credit risk.

This section provides information on the company's exposure to each of the risks listed above, the objectives, policies and processes for the management of these risks and the methods used to assess them, as well as capital management. These financial statements also include additional quantitative information. The company's risk management focuses on the volatility of financial markets and tries to minimise potential undesired effects on its financial position and results of operations.

With respect to financial risk disclosure, in order to reconcile the financial assets and liabilities identified pursuant to IFRS 7 with those reported in the statement of financial position, it is noted that the amounts shown in the statement of financial position match those of the financial assets and liabilities identified pursuant to IFRS 7, net of tax assets and equity investments. Furthermore, financial assets and liabilities include the respective hedging derivatives.

Financial assets and liabilities measured in accordance with the IFRS may be analysed as follows:

	(€'000)	
	31.12.2022	31.12.2021
Trade receivables at amortised cost	911,290	1,036,503
Other assets at amortised cost	4,664,202	4,101,531
Other financial assets at amortised cost	575,401	220,412
Derivatives at FVOCI	1,512	–
Other assets measured at FVTPL	489	–
Financial assets arising from service concession arrangements at amortised cost	6,804	14,012
Cash and cash equivalents	1,462,084	711,258
Total financial assets	7,621,782	6,083,717
Non-current loans and borrowings	2,741,575	2,702,058
Other financial liabilities at amortised cost	54,124	40,515
Derivatives at FVOCI	–	4,508
Trade payables at amortised cost	3,465,703	3,079,804
Other liabilities at amortised cost	4,270,217	2,977,532
Total financial liabilities	10,531,618	8,804,417

Credit risk

Credit risk is the risk that a customer or one of the counterparties of a financial instrument may cause a financial loss by not complying with an obligation. It mainly arises from trade receivables, loans to the public administration, derivatives and the company's cash and cash equivalents.

With respect to the derivatives used for hedging purposes and which can potentially generate credit exposure to counterparties, the company applies a specific policy that defines concentration thresholds by counterparty and credit rating.

With respect to the assessment of customers' credit risk, the company manages and analyses the risk of all new significant customers, regularly checks their commercial and financial exposure and monitors the collection of receivables from the public administration within the contractually agreed timeframe.

The following tables shows the company's exposure to credit risk at 31 December 2022 and 2021, broken down by category and counterparty. For information about the gross balance and the loss allowance, reference should be made to the notes to the relevant captions.

(€'000)

31 December 2022					
	Public administration	Third party customers	Financial institutions	Group companies	Total
Current and non-current trade receivables	40,121	404,088		467,081	911,290
Other current and non-current assets	4,484,863	67,968		111,371	4,664,202
Current and non-current financial assets	111,932	753	61,712	409,809	584,206
Cash and cash equivalents			1,462,084		1,462,084
Total financial assets at 31 December 2022	4,636,916	472,809	1,523,796	988,261	7,621,782

(€'000)

31 December 2021					
	Public administration	Third party customers	Financial institutions	Group companies	Total
Current and non-current trade receivables	51,615	367,383	–	631,517	1,050,515
Other current and non-current assets	3,992,676	68,397	–	40,458	4,101,531
Current and non-current financial assets	–	870	70,041	149,501	220,412
Cash and cash equivalents	–	–	711,259	–	711,259
Total financial assets at 31 December 2021	4,044,291	436,650	781,300	821,476	6,083,717

A significant portion of trade receivables and loans relates to government and public authorities, such as the MEF and the regions. The amount of financial assets whose recoverability is uncertain is negligible. However, an adequate loss allowance was accrued in this respect.

The maximum exposure to credit risk, broken down by counterparty and past due brackets, at 31 December 2022 is shown below:

(€'000)

31.12.2022						
Past due by						
	Not past due	0-180	180-360	360-720	More than 720 days	Total
Public administration, Italian government and regions (gross)	4,693,266	(2,920)	28,555	693	17,495	4,737,090
Loss allowance	(88,968)	55	(541)	(13)	(10,706)	(100,174)
Public administration, Italian government and regions (net)	4,604,298	(2,865)	28,014	680	6,789	4,636,916
Group companies	941,437	38,120	545	6,636	15,181	1,001,919
Loss allowance	(599)	(24)	-	(4)	(13,031)	(13,658)
Group companies (net)	940,838	38,096	545	6,632	2,150	988,261
Third party customers (gross)	377,320	40,349	23,214	24,661	167,077	632,621
Loss allowance	(34,295)	(388)	(223)	(237)	(124,669)	(159,812)
Third party customers (net)	343,025	39,961	22,991	24,424	42,408	472,809
Financial institutions	1,524,748					1,524,748
Loss allowance	(952)					(952)
Financial institutions (net)	1,523,796	-	-	-	-	1,523,796
Total exposure, net of the loss allowance	7,411,957	75,192	51,550	31,736	51,347	7,621,782

(€'000)

31.12.2021						
Past due by						
	Not past due	0-180	180-360	360-720	More than 720 days	Total
Public administration, Italian government and regions (gross)	4,022,188	1,593	14,759	1,241	17,960	4,057,740
Loss allowance	(3,706)	(1)	(14)	(1)	(9,727)	(13,449)
Public administration, Italian government and regions (net)	4,018,482	1,592	14,745	1,240	8,233	4,044,292
Group companies	656,886	123,959	24,232	8,464	21,517	835,059
Loss allowance	(445)	(84)	(16)	(6)	(13,031)	(13,583)
Group companies (net)	656,441	123,875	24,216	8,458	8,486	821,476
Third party customers (gross)	341,467	42,936	33,569	20,678	146,789	585,439
Loss allowance	(34,419)	(474)	(371)	(228)	(113,297)	(148,789)
Third party customers (net)	307,048	42,462	33,199	20,450	33,492	436,650
Financial institutions	781,826					781,826
Loss allowance	(526)					(526)
Financial institutions (net)	781,299	-	-	-	-	781,299
Total exposure, net of the loss allowance	5,763,270	167,929	72,160	30,148	50,211	6,083,717

Amounts from ordinary customers, past due by more than 720 days, mainly arise from disputes. The legal actions commenced for the recovery of some amounts are still underway.

Sometimes, in order to recover the amounts, the offsetting of receivables and payables with the same customer/supplier was proposed and carried out.

Amounts receivable from the public administration, past due by more than 720 days, mainly refer to local bodies facing financial difficulties as part of the unfavourable national economic situation.

The total exposure and the impairment of each category was reclassified by risk class at 31 December 2022, as per Standard & Poor's rating, shown below:

(€'000)

2022

	FVTPL	FVOCI	Amortised cost		Total
		12-month expected credit losses	12-month expected credit losses	lifetime - not impaired	
from AAA to BBB-	–	1,512	2,045,302	5,216,966	7,263,780
from BB to BB+	489	–	372	631,734	632,595
from B to CCC	–	–	5	–	5
Gross balance	489	1,512	2,045,679	5,848,700	7,896,380
Loss allowance	–	–	(1,391)	(273,207)	(274,598)
Carrying amount	489	1,512	2,044,288	5,575,494	7,621,782

(€'000)

2021

	FVTPL	FVOCI	Amortised cost		Total
		12-month expected credit losses	12-month expected credit losses	lifetime - not impaired	
from AAA to BBB-	–	–	931,426	4,743,245	5,674,671
from BB to BB+	–	–	981	584,410	585,391
from B to CCC	–	–	2	0	2
Gross balance	–	–	932,409	5,327,655	6,260,064
Loss allowance	–	–	(738)	(175,609)	(176,347)
Carrying amount	–	–	931,671	5,152,046	6,083,717

The table below shows changes in impairment losses and gains on financial assets:

(€'000)

	12-month expected credit losses	lifetime - not impaired	Total
Balance at 1 January 2022	(738)	(175,609)	(176,347)
Repaid financial assets	19	469	488
New assets acquired	(672)	(572)	(1,244)
Accrual to the loss allowance	–	(97,973)	(97,973)
Utilisation of the allowance	–	478	478
Balance at 31 December 2022	(1,391)	(273,207)	(274,598)

Liquidity risk

Liquidity risk is the risk that an entity may have difficulties in meeting obligations from financial liabilities to be settled with cash or another financial asset.

Cash flows, cash requirements and liquidity are monitored to ensure efficient and effective management of financial resources. The company's objective is the prudent management of the liquidity risk arising from ordinary operations.

As for the FS Italiane group's other main companies, the parent oversees RFI's liquidity management using the intragroup current account, whereby the company can manage its cash needs for ordinary operations, including by using committed and uncommitted lines that it may request from the parent.

In this respect, at 31 December 2022, RFI used only short-term lines of €300 million as a bridge loan for future medium- to long-term financing.

Furthermore, RFI holds a non-interest bearing current account with the MEF, included under cash and cash equivalents to ensure that the amounts disbursed by the government to finance the portion of RFI's investment match the progress of the investments.

The company's financial liabilities mainly refer to the financial resources used for the investments in HS/HC sections.

The following table shows the due dates of financial liabilities, including interest to be paid:

	(€'000)					
31.12.2022	6 months or less	6-12 months	1-2 years	2-5 years	After 5 years	Total
Non-derivative financial liabilities*						
Bank loans and borrowings	89,521	74,433	97,050	202,997	249,188	713,189
Lease liabilities	7,047	6,296	10,636	24,630	10,111	58,720
Loans and borrowings from other financial backers	6,417	6,368	–	–	–	12,785
Loans and borrowings from group companies	412,713	19,294	540,080	574,711	729,819	2,276,617
Total	515,698	106,391	647,766	802,338	989,118	3,061,311
Trade payables	582,913	2,866,295	16,495			3,465,703
Derivatives*	1,766	1,327	1,396	140	–	4,629

*For a better presentation, financial liabilities are shown gross of accrued interest

	(€'000)					
31.12.2021	6 months or less	6-12 months	1-2 years	2-5 years	After 5 years	Total
Non-derivative financial liabilities*						
Bank loans and borrowings	84,263	84,666	154,731	221,519	324,323	869,502
Lease liabilities	8,287	7,771	7,704	11,709	6,805	42,276
Loans and borrowings from other financial backers	6,505	6,250	12,500	–	–	25,255
Loans and borrowings from group companies	307,035	4,179	103,396	827,683	717,096	1,959,388
Total	406,089	102,865	278,331	1,060,911	1,048,224	2,896,420
Trade payables	363,598	2,699,622	16,584			3,079,804
Derivatives*	1,766	1,327	1,396	140	–	4,629

*For a better presentation, financial liabilities are shown gross of accrued interest

The contractual flows from variable-rate loans have been calculated using the forward rates estimated at the reporting date. Loans and borrowings from group companies comprise the current portion of loans from the parent which, due to their nature, are among those due within six months.

With respect to contractual payment dates, the most significant portion relates to trade payables for contracts and works which are mainly repaid through government grants. The residual part is repaid using cash flows from operations.

The following tables show the repayments of financial liabilities at 31 December 2022 and 2021 within one year, from 1 to 5 years and after 5 years.

(€'000)				
31.12.2022	Carrying amount	Within one year	1-5 years	After 5 years
Non-derivative financial liabilities*				
Bank loans and borrowings	635,936	147,921	257,165	230,850
Lease liabilities	54,038	11,978	32,230	9,829
Loans and borrowings from other financial backers	18,750	18,750		–
Loans and borrowings from group companies	2,086,889	398,494	998,501	689,894
Total	2,795,613	577,143	1,287,896	930,573

*For a better presentation, non-derivative financial liabilities are shown gross of accrued interest

(€'000)				
31.12.2021	Carrying amount	Within one year	1-5 years	After 5 years
Non-derivative financial liabilities*				
Bank loans and borrowings	794,964	160,397	344,785	289,782
Lease liabilities	40,259	15,458	18,304	6,497
Loans and borrowings from other financial backers	25,256	12,756	12,500	–
Loans and borrowings from group companies	1,882,094	303,477	888,763	689,854
Total	2,742,573	492,088	1,264,353	986,133

*For a better presentation, non-derivative financial liabilities are shown gross of accrued interest

Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument may fluctuate following changes in market prices, due to changes in exchange or interest rates. The objective of market risk management is to manage and maintain the company's exposure to this risk within acceptable levels, while optimising returns on investments. The company uses hedging transactions to manage the volatility of the results.

Interest rate risk

Interest rate risk is associated with the intrinsic variability of market interest rates which generates uncertainties as to the future cash flows associated with financing activities.

With respect to the actual and forecast non-current indebtedness, the company, assisted by the parent, has adopted an interest rate risk management policy which is aimed at (i) capping total financial expense (including in case of negative scenarios) within a level that does not exceed the assumptions set out in the business plan, while (ii) freeing additional resources with respect to the assumed borrowing cost. RFI's derivatives are interest rate swaps exclusively for hedging purposes in accordance with cash flow hedging requirements.

The interest rate swaps entered into by the company in 2012 following the exercise of the early termination option are the economic continuation of the hedges of the variable-rate loans raised in 2002. Their total notional amount is €111 million.

Fair value estimate

The company's portfolio includes over-the-counter (OTC) instruments which are classified in Level 2.

Financial instruments have been measured at fair value using financial models based on market standards. Specifically, this entailed determining the net present value of future cash flows for swaps.

The inputs used to feed the above models reflect observable market parameters which are available with the main financial info providers.

Specifically, the swap vs. three-month Euribor curve figures were used, as well as those related to the swap vs. six-month Euribor curve, the Eur interest rate volatility curve and the credit default swap (CDS) curve of the parties to the derivative contract, which reflect the input widely accepted by market operators to calculate non-performance risk. This risk is calculated using adequate financial valuation techniques and models which include, inter alia, the following factors i) the risk exposure, being the potential mark-to-market exposure throughout the life of the financial instrument, ii) adequate CDS curves to reflect their probabilities of default (PD).

The table below shows variable and fixed rate loans and borrowings (including the current portion):

	(€'000)					
	Carrying amount	Contractual cash flows	Current portion	1 - 2 years	2 - 5 years	after 5 years
- variable rate	1,586,942	1,739,125	512,329	575,379	105,886	545,531
- fixed rate	1,208,671	1,322,186	109,760	72,387	696,452	443,587
Balance at 31 December 2022	2,795,613	3,061,311	622,089	647,766	802,338	989,118
- variable rate	1,654,601	1,712,329	388,585	181,515	597,551	544,678
- fixed rate	1,087,972	1,184,091	120,370	96,816	463,359	503,546
Balance at 31 December 2021	2,742,573	2,896,420	508,955	278,331	1,060,911	1,048,224

*For a better presentation, financial liabilities are shown gross of accrued expenses

The table below shows the percentage of variable- and fixed-rate loans (including the current portion), before and after hedging derivatives, which convert variable rates into fixed rates.

	31.12.2022	31.12.2021
Before hedging with derivatives		
variable rate	56.8%	60.3%
fixed rate	43.2%	39.7%
After hedging with derivatives		
variable rate	52.9%	54.1%
hedged variable rate	0.0%	0.0%
fixed rate	47.1%	45.9%

The following sensitivity analysis shows the effects that would have been recorded in terms of changes in interest expense had an increase or a decrease of 50 basis points in the Euribor interest rates affected loans in 2022:

	+ 50 bps shift	- 50 bps shift
Interest expense on variable-rate liabilities	2,913	(2,582)
Net cash flow from hedges	(1,010)	883
Total	1,902	(1,699)

If, at the reporting date, the interest rates had been 50 basis points higher, with all other variables being equal, profit for the year net of the tax effect would have been €1,902 million lower. At the same date, had interest rates been 50 basis points lower, with all other variables being equal, profit for the year would have been €1,699 million higher.

The following sensitivity analysis shows the effects of a parallel shift of 50 basis points up or down in the swap rate curve at 31 December 2022 on the fair value of the derivative financial instruments. The effects would be substantially recognised in the specific equity reserve.

Currency risk

	+ 50 bps shift	- 50 bps shift
Fair value of hedging derivatives	1,179	(1,188)
Total	1,179	(1,188)

RFI is mainly active in Italy as well as in countries of the Eurozone. Therefore, the risk arising from the different currencies in which it operates is very limited.

Capital management

The company's main objective with respect to capital risk management is to safeguard its ability to continue as a going concern, while ensuring benefits for the various stakeholders. The company also intends to maintain an optimal capital structure in order to reduce the cost of debt.

38. Other information

- Contingent assets and liabilities

The company's main contingent assets and liabilities that underwent changes in the year are reported below. The company has assessed the risk of losing the case underlying the contingent liability reported below and considers it remote or possible.

RFI - Gruppo COSIAC S.p.A.

In 2011, Gruppo COSIAC S.p.A. ("COSIAC") brought a legal action before the Roma Civil Court claiming compensation for damage (roughly €1.039 billion) following the alleged violation of rules of integrity, impartiality and good faith in the performance of the integrated service concession for the laying of double tracks on the Tommaso Natale – Carini railway line, and the connection to the Punta Raisi Airport. With ruling no. 9769/2015, the Roma Court, admitting all RFI's arguments and ordering COSIAC to pay all legal fees, declared that it did not have jurisdiction, while the administrative judge did, and denied all claims of liability (contractual, pre-contractual and non-contractual). COSIAC appealed against the ruling. With ruling no. 1477 of 1 March 2019, the Roma Court of Appeal partially admitted COSIAC's appeal and transferred the case to the Court, recognising the ordinary judge's jurisdiction on the assumption that COSIAC's claim in the case was an expression of its subjective right arising from a contract subject to private law. RFI S.p.A. appealed against this ruling before the Court of Cassation and requested its revocation before the Court of Appeal, as it was in contrast with the cases already pending in civil and administrative court, including with respect to jurisdiction. With summons notified on 3 May 2019, COSIAC reinstated the case before the Roma Civil Court. RFI S.p.A. appeared in court and requested a stay of the proceedings pending the decisions of the Court of Cassation and the Court of Appeal for revocation on the matters of jurisdiction and conflicting cases. The judge postponed any decision on the requested stay of the proceedings until reading of the parties' briefs. After granting the terms pursuant to article 183.6 of the Code of Civil Procedure, at the hearing held on 31 March 2021 for the admission of evidence, the judge, having read the parties' briefs and considering the case to be based on documentary evidence, adjourned it to the hearing for the closing arguments on 26 May 2022. During that hearing, the judge agreed to hear the case pursuant to article 190 of the Code of Civil Procedure, reserving "any decision on the request to postpone the deadline for filing the documentation made in writing by RFI" to the ruling.

Meanwhile, with ruling no. 28388/2020 of 14 December 2020, the Court of Cassation rejected RFI's appeal, confirming the decision of the appeal judge. RFI appealed against the ruling before Italy's Supreme Court: the case was settled with order no. 8469/2022, which declared the appeal inadmissible.

In addition, the above-mentioned revocation request before the Court of Appeal is still pending, being in contrast with the cases already pending in civil and administrative court, including with respect to jurisdiction (the hearing, which has been postponed several times, has been set for 13 April 2023). However, notwithstanding the pending revocation proceedings, after submitting the closing arguments at the hearing of 26 May 2022, the Roma Court issued a favourable ruling (no. 15336/2022) on 20 October 2022, rejecting all the claims filed by COSIAC and Hera S.p.A. under extraordinary administration and ordering them jointly and severally to reimburse the costs, set at €350,000 (in addition to overheads and legal charges).

COSIAC appealed against ruling no. 15336/22 on 28 November 2022. The hearing to discuss the summons was scheduled for 20 March 2023.

- **Audit fees**

Pursuant to article 37.16 of Legislative decree no. 39/2010 and article 2427.16-bis of the Italian Civil Code, it is noted that the total fees for 2022 due to the independent auditors and its network amount to €542 thousand and include the fees paid for services other than the statutory audit (approximately €262 thousand).

- **Directors' and statutory auditors' fees**

The following fees were paid to directors and statutory auditors for the performance of their duties, as per the relevant resolutions:

	(€'000)		
	2022	2021	Changes
Directors *	220	220	-
Statutory auditors	83	83	-
Total	303	303	-

* In addition, fees of €55 thousand were paid to the non-group members of the supervisory body.

- **Management and coordination**

The key figures of the direct parent at 31 December 2021 are available on the company's website www.fsitaliane.it and at the head office of FS Italiane S.p.A..

	(€'000)	
	31 December 2021	31 December 2020
Assets		
Total non-current assets	47,169,061	45,648,138
Total current assets	5,852,308	4,691,206
Assets held for sale and disposal groups		
Total assets	53,021,369	50,339,344
Equity		
Share capital	39,204,174	39,204,174
Reserves	66,583	64,737
Retained earnings	628,862	589,951
Profit for the year	137	40,959
Total equity	39,899,756	39,899,821
Liabilities		
Total non-current liabilities	8,386,550	6,882,567
Total current liabilities	4,735,063	3,556,956
Total liabilities	13,121,613	10,439,523
Total equity and liabilities	53,021,369	50,339,344
	2021	2020
Revenue	162,869	196,811
Operating costs	267,911	255,970
Amortisation and depreciation	24,585	22,977
Net impairment losses	1,760	5,157
Net financial income	98,874	114,870
Income taxes	32,650	13,382
Post-tax profit (loss) from discontinued operations		
Profit for the year	137	40,959

- Transactions with key managers

The general conditions that govern transactions with key managers and the parties related to them are not more favourable than those applied, or that could have been reasonably applied, to similar transactions with managers other than key managers associated with the same entities at market conditions.

	(€'000)	
	2022	2021
Short-term benefits	4,158	4,364
Post-employment benefits	322	352
Termination benefits	0	0
Total	4,480	4,716

In addition to short-term benefits, a variable portion is to be paid in 2023, for an amount not exceeding €1,120 thousand, once checks have been made on whether objectives have been reached.

The key managers did not carry out any transactions, directly or through close family members, with the company or companies controlled directly or indirectly by the latter.

- Related party transactions

The main transactions between the company and its related parties, which were all carried out on an arm's length basis, are described below:

		Assets	Liabilities
Subsidiaries			
Bluferries S.r.l.	Trade and other: health services, provision of services, leases and recharging of building expenses, company officers.		Trade and other: reimbursement for seconded personnel and sundry leases.
Blu Jet S.r.l.	Trade and other: reimbursement for company officers, health and other services.		Trade and other: ferrying services, professional training courses and material.
Infrarail S.r.l.	Trade and other: reimbursement of personnel expense, health services and spare parts.		Trade and other: reimbursement of personnel expense.
Terminali Italia S.r.l.	Trade and other: freight terminal leases, reimbursement for seconded company officers.		Trade and other: shunting services, building expenses. Group services (utilities) and maintenance of rolling stock. Use of third-party assets (rolling stock and carriage hire), lighting and driving force, buildings used in operations. Training, seconded personnel reimbursement and sundry fees.
Grandi Stazioni Rail S.p.A.	Trade and other: concession fees, revenue from services, supplies and works. Company officers.		Trade and other: expense for failure to vacate some properties, building expenses, leases and ancillary charges related to premises. Expense for maintenance of buildings used in operations.
Associates			
Quadrante Europa S.p.A.	Trade and other: company officers. Financial: shareholder loan.		-
Parents			
Ferrovie dello Stato Italiane S.p.A. (a)	Trade and other: services, works and supplies, training, health services, GSM-R utilities, level crossings and parallel routes. Financial: interest income.		Trade and other: licences to use the trademark, seconded personnel, IT services, labour law assistance, finance area, external relations and institutional affairs. Professional training courses and consultancy, non-financial fees. Operating costs and service costs. Financial: interest expense on intragroup cash pooling account, bonds, bank and postal commissions, IFRS 16.
Other related companies			

Sita S.p.A. in liquidation	Trade and other: leases and health services	Trade and other: leases and building expenses.
Ferservizi S.p.A. (b)	Trade and other: operating building leases, health services and reimbursement for company officers.	Trade and other: global service provider activities, administrative services, personnel management, training, accounting and treasury services, services for purchasing travel tickets and hotel bookings, facilities, railway hotels, administrative management of catering, seconded personnel costs and building expenses.
FS Technology S.p.A. (b)	Trade and other: revenue from company officers - managers and health services.	Trade and other: IT services and seconded personnel costs.
Italcertifer ScpA (b)	Trade and other: health services, leases, GSM-R utilities, repayments for testing, certification and consultancy.	Trade and other: preliminary activities and investigations for the certification of components and railway systems and carriage hire.
Mercitalia Logistics S.p.A. (b)	Trade and other: services and health services.	Trade and other: freight transport, leases and ancillary charges. Financial: IFRS 16.
Mercitalia Rail S.r.l.	Trade and other: leases of buildings used and not used in operations, leases of land, recharging of building expenses, revenue from GSM-R utilities, services provided to the railway companies (sale of energy, ferrying services, electrical energy used for traction, traffic-related services), health services, revenue from works and supplies and performance regime penalty income.	Trade and other: transport and shipping services, rolling stock maintenance, carriage hire, contracting services, seconded personnel.
Mercitalia Shunting & Terminal (formerly Serfer S.p.A.)	Trade and other: leases of land, revenue from GSM utilities, services provided to the railway companies (sale of energy, electrical energy used for traction, traffic-related services), health services, revenue from works and supplies, professional training and access fees. Performance regime penalty income. Other services.	Trade and other: rolling stock maintenance, carriage leases, transport and shipping, cleaning services and other third-party services.
Fercredit S.p.A. (b)	Trade and other: health and other services.	Trade and other: supplier analyses. Financial: loans to employees.
Italferr S.p.A. (b)	Trade and other: health services, leases of buildings used in operations, professional training and revenue from the use of GSM.	Trade: network investment works oversight, design and control and training courses.
Metropark S.p.A.	Trade and other: lease of buildings and areas, reimbursement for seconded personnel, health services and revenue from supplies and services.	Trade and other: contracted and third-party services.
Mercitalia Intermodal S.p.A. (formerly Cemat S.p.A.)	Trade: leases of freight terminals and health services.	Trade and other: seconded personnel costs.
Grandi Stazioni Immobiliare S.p.A. (b)	-	Trade and other: leases and building expenses
Trenitalia S.p.A. (b)	Trade and other: access fees, electrical energy used for traction, ferrying and shunting services, health services, leases, leases of land, GSM-R utilities, sale of HV energy, traffic-related services, recharge of building expenses, spare materials, services and supplies and performance regime penalty income. Financial: prior year income.	Trade and other: transport services for employees for work and leisure, IT services, leases and related costs, carriage hire, purchase and maintenance of rolling stock, shunting and freight transport services, travel and seconded personnel expenses and other services. Financial: IFRS 16.
Trenitalia TPER Scarl	Trade and other: access fees, electrical energy used for traction, health services, leases, GSM-R utilities, traffic-related services, recharge of building expenses, services and supplies and performance regime penalty income.	Trade and other: group repayments for services.
Cremonesi Workshop	Trade and other: health services.	-
TX Logistik AG	Trade and other: access fees, traction, shunting and traffic-related services, freight terminal leases, health services and professional training; performance regime penalty income.	Trade and other: performance regime penalty expense.

TX Logistik Transalpine GmbH	Trade and other: services provided to the railway companies (access fees, electrical energy used for traction and shunting services) and health services.	Trade and other: leases.
Terminal Alptransit S.r.l.	Trade and other: leases of owner-occupied properties.	-
FS International (b)	Trade and other: health services.	Trade and other: seconded personnel.
FS Sistemi Urbani S.r.l. (b)	Trade and other: provision of works, services and supplies, health services. Professional courses. Level crossings and parallel routes.	Trade and other: leases and ancillary charges related to premises and services. Financial: IFRS 16.
Trenord S.r.l.	Trade and other: access fees, traction and shunting services, health services, revenue from GSM-R utilities, sale of HV energy, traffic-related services, leases, services and supplies, performance regime penalty income.	Trade and other: contracted services. Reimbursement of costs for intragroup services.
Busitalia - Sita Nord (b)	Trade and other: health services, revenue from GSM-R utilities, performance regime penalty income, leases and fees.	Trade and other: seconded personnel.
Busitalia - Campania S.p.A.	Trade and other: health services, leases and land leases.	-
Busitalia Rail Service	Trade and other: health services and leases for operating areas.	Trade and other: use of third-party assets.
Hellenic Train	Trade and other: seconded personnel.	Trade and other: seconded personnel.
TELT S.a.s	Trade and other: seconded personnel.	-
Busitalia Veneto S.p.A.	Trade and other: health services.	Trade and other: seconded personnel reimbursement.
Ferrovie Sud Est S.r.l. (b)	Trade and other: health services, revenue from services, works and supplies. GSM utilities. Professional courses.	Trade and other: seconded personnel reimbursement.
ANAS Group (b)	Trade and other: services, works and supplies; revenue from company officers - managers. Level crossings and parallel routes.	Trade and other: leases.
Joint arrangements		
BBT S.p.A.	Trade and other: reimbursement for company officers, leases, level crossings and accesses to the railway infrastructure, sundry services and supplies and spare materials.	Trade and other: seconded personnel services.
Group associates		
Eurogateway S.r.l.	Trade and other: traffic-related services and GSM-R utilities.	-
Metro 5	Trade and other: company officers.	
SITAF S.p.A. (equity-accounted)	Trade and other: level crossings and special accesses.	Trade and other: motorway tolls for vehicles.
LI-NEA S.p.A.	Trade and other: health services.	-
Other related parties		
CDP group	Trade and other: high-voltage network maintenance, level crossings and special accesses, network operation and remote control.	Trade and other: lighting and driving force, electrical energy and fuel for traction, utilities. Financial: loans and default interest.
ENEL group	Trade and other: leases, land leases, level crossings and special accesses.	Trade and other: utilities (water, energy, gas), lighting and driving force and electrical energy for train traction. Financial: interest and default interest.
ENI group	Trade and other: level crossings and special accesses; land and operating area leases; fees for work on connecting tracks.	Trade and other: gas utilities and fuel, use of vehicles and service trucks.
Leonardo group	Trade and other: leases and level crossings and special accesses, GSM-R utilities.	-
GSE group	Trade: provision of services	Trade and other: electrical energy for train traction, lighting and driving force and energy utilities.
Invitalia group	Trade and other: level crossings and special accesses and services for processing for third parties.	Trade and other: services

IstPolZeccaStato group	Trade and other: level crossings, special accesses and parallel routes.	Trade and other: purchases of spaces for legal notices, press advertising and events. Financial: interest on guarantee deposits.
Poste Italiane group	Trade and other: operating and non-operating building leases and land leases. Financial: current accounts.	Trade and other: postal charges and sundry services.
RAI group	Trade and other: leases, level crossings and special accesses.	-
ENAV group	Trade and other	Trade and other
SITAF group	Trade and other: level crossings and special accesses.	Trade and other
EUROFER/PREVINDAI pension funds	-	Trade and other: social security contributions and charges.
Other pension funds	-	Trade and other: insurance policies and social security charges.
Banca Monte dei Paschi di Siena group	-	Trade receivables and other assets transferred.
Fondazione FS Italiane	Trade and other: leases, land leases, health and other services.	Trade and other: donations, charges related to events and exhibitions.
Ferrovie Nord Milano's subsidiaries	Trade and other: health services, level crossings and special accesses, professional courses.	Trade and other: use of third party assets.
Scarl, associations, EEIG, partnerships	Trade and other: recharging of services.	Trade and other: membership fees.
Equitalia Giustizia group	-	Trade and other: taxes

(a) Company carrying out management and coordination activities (direct parent)

(b) Company managed and coordinated by (a)

- Other related party transactions

The table below summarises the statement of financial position and income statement balances as at and for the year ended 31 December 2022 generated by related party transactions.

Financial transactions between the parent and its related parties are shown separately, i.e., without offsetting positive against negative components, although these components refer to similar transactions (e.g., repayments). Consequently, the figures presented do not necessarily coincide with those set out in the corresponding tables of the notes to the financial statements.

Trade and other transactions:

	31 December 2022			2022	
	Assets	Liabilities	Guarantees	Costs	Revenue
Subsidiaries	10,316	33,285	-	111,533	10,079
Bluferries S.r.l.	188	322	-	208	287
Blu Jet S.r.l.	332	1,290	-	17,312	135
Terminali Italia S.r.l.	2,338	3,799	-	2,604	2,071
Grandi Stazioni Rail S.p.A.	7,073	16,760	-	92,455	7,487
Tunnel Ferr. del Brennero S.p.A.	-	-	-	-	-
Infrarail S.r.l.	384	11,114	-	(1,047)	100
Associates	25	-	-	-	25
Quadrante Europa S.p.A.	25	-	-	-	25
Parents	90,673	37,433	178,467	33,948	526
Ferrovie dello Stato S.p.A.	90,673	37,433	178,467	33,948	526
Other related companies	479,701	711,726	-	226,683	1,272,104
Sita S.p.A. in liquidation	67	2	-	-	-
Ferservizi S.p.A.	520	18,405	-	66,855	1,075
Italcertifer ScpA	438	1,560	-	660	629
Mercitalia Logistics S.p.A.	2,242	1,026	-	398	(5)
Mercitalia Intermodal (formerly CEMAT)	96	2	-	42	(880)

Mercitalia Rail S.r.l.	51,455	68,964	–	13,574	55,688
Mercitalia Shunting & Terminal (formerly Serfer)	1,887	7,450	–	12,515	2,041
Fercredit S.p.A.	2	332,634	–	98	25
Italferr S.p.A.	3,269	139,345	–	5,011	739
Metropark S.p.A.	974	120	–	(67)	140
Grandi Stazioni Immobiliare S.p.A.	–	250	–	100	–
Trenitalia S.p.A.	312,521	111,423	–	20,775	1,020,887
Trenitalia TPER Scarl	18,544	970	–	(35)	54,291
TX Logistik AG	327	4	–	(410)	85
TX Logistik GmbH	–	–	–	–	–
TX Logistik Transalpine GmbH	906	1,910	–	–	3,088
FS International	95	–	–	–	–
FS Sistemi Urbani S.r.l.	16,027	5,551	–	7,223	14,122
Trenord S.r.l.	42,879	2,757	–	(603)	115,528
Busitalia Sita Nord S.r.l.	437	23	–	(109)	1,139
Busitalia Campania S.p.A.	52	–	–	–	137
Busitalia Rail Service	(4)	16	–	18	41
Busitalia Veneto S.p.A.	193	–	–	(163)	183
Cremonesi Workshop	3	(28)	–	–	12
T.E.L.T. Sas (formerly L.T.F. Sas)	–	–	–	15	–
Hellenic Train	19	–	–	(37)	–
Terminal Alptransit	–	–	–	–	8
FSE S.r.l.	15,696	1	–	(1,056)	2,592
FSE - road transport	181	–	–	(128)	104
ANAS Group	10,849	305	–	(12)	369
FS Technology S.p.A.	29	19,036	–	102,018	64
Joint arrangements	5,981	52	–	(848)	1,789
BBT S.p.A.	5,981	52	–	(848)	1,789
Associates of subsidiaries	–	–	–	–	–
Terminal Tremestieri S.r.l.	–	–	–	–	–
Group associates	32	51	–	4	41
Eurogateway S.r.l.	–	–	–	–	1
Metro 5	10	–	–	–	10
FNM S.p.A. (formerly Ferrovie Nord Milano S.p.A.)	–	–	–	–	–
SITAF S.p.A. (equity accounted)	21	51	–	4	30
LI-NEA S.p.A.	–	–	–	–	–
Other related parties	32,977	584,228	3,603,219	2,036,290	9,155
ENEL group	9,640	14,866	20,001	42,975	1,972
ENI group	671	2,644	284	2,093	431
Leonardo group	105	1,100	–	130	57
Invitalia group	(62)	1,302	442	–	65
Cassa Depositi e Prestiti group	18,760	495,916	3,582,447	112,195	3,038
CONSAP S.p.A.	–	–	–	1	–
ENAV group	14	84	–	–	–
GSE group	3	46,543	–	1,845,558	69
IstPolZeccaStato group	1	159	–	732	2
Poste Italiane group	325	10	36	412	485
RAI group	9	5	–	–	7
SOGIN group	1	–	–	–	–
EUROFER/PREVINDAI pension funds	–	7,878	–	9,415	–
Other pension funds	687	12,612	9	15,192	5
Scarl, associations, EEIG, partnerships	316	80	–	1,112	100
Ferrovie Nord Milano's subsidiaries	39	13	–	1	677
Fondazione FS Italiane	2,468	78	–	6,467	2,248
Banca Monte dei Paschi di Siena group	–	939	–	–	–
SITAF group	2	1	–	–	–
Equitalia Giustizia group	–	–	–	6	–
TOTAL	619,704	1,366,776	3,781,685	2,407,608	1,293,720

- 1) Individual investees of the MEF, as per the list above, shall be considered within their own group and added to other related parties pertaining to the same group. For example, any transactions with TERNA shall be added to other transactions with companies of the same group under the caption: CDP Group
- 2) Any negative amounts, where present, reflect balances that are not offset.

Financial transactions:

	31 December 2022			2022	
	Assets	Liabilities	Guarantees	Expense	Income
Associates	265	–	–	–	–
Quadrante Europa S.p.A.	265	–	–	–	–
Parents	419,802	2,086,643	72,411	19,306	377
Ferrovie dello Stato Italiane S.p.A.	419,802	2,086,643	72,411	19,306	377
Other related companies	–	38,816	–	305	–
FS Sistemi Urbani	–	34,586	–	204	–
Trenitalia S.p.A.	–	3,005	–	64	–
Mercitalia Logistics	–	979	–	14	–
Fercredit S.p.A.	–	246	–	23	–
Other related parties	2,147	18,750	–	77	–
Poste Italiane group	2,148	–	–	–	–
ENAV group	(1)	–	–	–	–
Cassa Depositi e Prestiti group	–	18,750	–	1	–
Enel group	–	–	–	76	–
Eni group	–	–	–	–	–
TOTAL	422,214	2,144,210	72,411	19,688	377

1) Individual investees of the MEF, as per the list above, shall be considered within their own group and added to other related parties pertaining to the same group. For example, any transactions with TERNA shall be added to other transactions with companies of the same group under the caption: CDP Group

- Guarantees

	31 December 2022		31 December 2021
Guarantees			
1. RISKS			
1.1 Sureties		234,913	230,371
Total 1		234,913	230,371
2. OTHER			
2.1 Sureties issued by third parties in favour of the company		4,927,794	4,894,150
Total 2		4,927,794	4,894,150

Risks mainly refer to the sureties that RFI issued to the public administrations (the Ministry of the Environment, regions and provinces) affected by the laying of HS/HC lines.

Sureties issued in favour of the company mainly refer to guarantees issued by FS Italiane S.p.A. on behalf of RFI to third parties (the tax authorities for VAT credit, GSE for energy, etc.) and guarantees given in favour of the company by general contractors, contracting bodies and suppliers.

- THIRD-PARTY FINANCIAL COMMITMENTS

Developments at 31 December 2022 in the captions related to commitments undertaken by bodies including the government and the EU in favour of the company following the issue of loans, in the form of share capital increases or sundry contributions, are shown below:

Investments financed by the government and the EU between 1993 and 2022:

	Available resources	Disbursements	Recognised assets	Recognised	Advances paid	Amounts to be received from the government and the EU for investments to be made	Residual amounts for loans and borrowings received and not yet used
At 31 December 2021	178,777,519	94,877,908	3,749,464	89,056,086	3,742,530	80,150,147	2,079,292
At 31 December 2022	188,090,167	102,405,617	3,943,868	97,152,175	3,821,260	81,740,682	1,432,182
Delta	9,312,648	7,527,709	194,404	8,096,089	78,730	1,590,535	(647,110)

Specifically, total available resources considered at 31 December 2022 amount to approximately €188 billion. This amount includes loans and borrowings "on an accruals basis" pursuant to several Budget Acts and those pursuant to ad hoc legislative measures as well as the resources from the European Union. Available resources rose €9,312,648 thousand on 31 December 2021 due to the new loans granted to the company in 2022. At 31 December 2022, the disbursements received in respect of the above granted amounts amount to €102,405,617 thousand and include total disbursements from public sources provided by the different Budget Acts and long-term financing laws, as well as EU funds.

At 31 December 2022, disbursements of €97,152,175 thousand were recognised, up €8,096,089 thousand on the previous year, due to the amounts recognised during the year in respect of the above disbursements.

Assets recognised in respect of the above disbursements were included under Available resources and amount to €3,943,868 thousand. They include assets recognised following the amendment to the criterion used to disburse government resources for investments, previously accounted for as share capital increases and now as grants related to assets pursuant to article 1.86 of the 2006 Finance Act, due from the MEF and the MIT for disbursements arising from Budget Acts and long-term financing laws, not yet disbursed.

Finally, at 31 December 2022, the financial advances granted to contractors in accordance with current legislation, in respect of the allocations included under Available resources but not yet reflected in the recognised balances of the above works effectively carried out, amount to €3,821,260 thousand.

- Public funds

The disclosure required by article 1.125 and 126 of Law no. 124/2017 is provided below and in other sections of this document.

The financial figures refer to cash inflows and outflows for 2022.

The following table provides the disclosure required by article 1.125 of Law no. 124/2017 for 2022:

Provider		2022
MEF	Grants related to assets	4,927,682,329
MIT	Grants related to assets	370,878,882
Prime Minister	Grants related to assets	33,408,979
EU	Grants related to assets	1,452,800,272
Local bodies	Grants related to assets	79,409,125
MIT	Grants related to income	27,440,000
MEF	Grants related to income	1,155,556,791
MIT Chap. 1274/7302/1300 Incentive scheme for railway freight transport	Pass-through grants*	114,300,751
CSEA	Pass-through grants*	1,203,117,857
Fondimpresa	Aid for training (article 31)	515,358

(*) railway companies are the ultimate beneficiaries of these grants (MIT chap. 1274 – CSEA).

The following table provides the disclosure required by article 1.126 of Law no. 124/2017 about 2022:

Beneficiary		2022
Fondazione FS Italiane	Grant	6,547,000
Associazione Nazionale DLF	Grant	1,366,173
ART, Fondazione Politecnico Milan, Fondazione bambino Gesù, I.G.I., Ass.per la Protezione dalle Corrosioni Elettr., Ass. Euromobility, Class Onlus and Motus	Membership fees and sponsorships	1,019,934

Euros

39. EVENTS AFTER THE REPORTING DATE

January

Demerger to FS Security

The partial demerger of RFI's security business unit to the new related company FS Security S.p.A. became effective on 1 January 2023. The demerger was approved by RFI's shareholder during the extraordinary meeting of 18 November 2022 based on the demerger plan approved by the board of directors on 22 October 2022. This transaction is part of the FS Italiane group's larger reorganisation, fits into the group's strategy and will reap benefits for the companies participating in the demerger, while also giving rise to industrial synergies for the group.

ART decision no. 11/2023

On 27 January 2023, the ART published decision no. 11 "Review of the criteria for the determination of the fees for access and use of the railway infrastructure approved with decision no. 96/2015 and extension and specification of the same to the interconnected regional railways. Start of the procedure and calling of a consultation".

With this decision, the ART proposed a review of the criteria laid down by decision no. 96/2015 for the determination of the fees to access and use the railway infrastructure and the service consideration (and extending them to the interconnected regional networks) and began a public consultation. In accordance with the principle of maintaining the substantial stability of the current regulatory framework, the review of these criteria covered certain aspects relating to: (i) the infrastructure operator's organisational and decision-making autonomy; (ii) the costing of the minimum access package (MAP); (iii) the pricing of the MAP; (iv) non-MAP services; and (v) specific measures for the extension of the principles and criteria to the interconnected regional railways.

Specifically, with respect to the costing of the MAP, the main updates are meant to result in a more accurate estimate of the specific cost components recognised in the fee.

With specific regard to the efficiency ratio of operating costs, the annual efficiency ratio established in decision no. 96/2015 (currently 2%) will be replaced with a specific methodology to be followed to determine two new rates. Furthermore, the ART has introduced the possibility of updating the fees annually according to: i) the actual progress of investments based on the ex ante programme; and ii) any new legislation or regulations.

Even after this review, total revenue generated will always enable the respective recovery of direct costs (component A) and residual costs to cover actual total net costs (component B).

The infrastructure operator is required to use specific econometric/engineering models to determine component A of the fee, which refers to costs directly related to the performance of the railway service, with the application of a specific forward-looking model to predict traffic.

The ART has introduced some flexibility in the calculation of component B of the fee (the mark-up) and requires the infrastructure operator to base component B on three factors: market segment, network segment and time category. Furthermore, RFI will be required to formulate the sustainability analysis used to evaluate the various railway market segments' ability to contribute to achieving sustainability objectives.

As for component C, which was previously optional, the ART has required the application of sub-component C1 on sections of the infrastructure with limited capacity or that are saturated as defined by the Network Prospectus. In addition, the ART has made it mandatory to apply a new negative component, C5, for the optimisation of travel times on the scheduled hourly routes.

For open access premium services (operating the high-service network), the ART has maintained the range of maximum variability of the fee laid down by decision no. 96/2015, aligning the threshold amount with the average

unit fee in effect in 2015 (€8.20 per train-km). Furthermore, it has confirmed the variability range for freight and passenger transport services operated under public service obligations, referencing the average unit fee in 2022 as the threshold.

The ART has maintained the differentiation of type-A and type-B plant operators for non-MAP services (type B being a residual category for operators that do not have significant market power). It has reinforced the transparency and regulatory accounting obligations established in decision no. 96/2015 for type-A operators and introduced specific rules for the calculation of the fee.

RFI sent the ART its comments and proposed changes on 10 March 2023, within the consultation deadlines.

In accordance with the new criteria, which will be defined upon completion of this procedure, by 30 June 2023, RFI must prepare and send the ART a fee proposal for the new regulatory period from 2024 to 2028 (since the same fees as the regulatory period that ended in 2021 were maintained for 2022 and 2023, increased only by the planned inflation rate), for both MAP and non-MAP services. The ART will examine the fee proposal for compliance with the requirements by 30 November 2023.

March

K2 discount pursuant to Ministerial decree no. 44T/2000 - Roma Court ruling

On 1 March 2023, the Roma Court ruled in the first-level civil proceedings no. 59994 in the general register for civil disputes of 2017, following the hearing of 15 June 2022. Reference should be made to the paragraph on "Litigation and disputes" in the directors' report for additional information.

40. Allocation of profit for the year

The financial statements as at and for the year ended 31 December 2022 show a profit for the year of €262,965,473.06.

The board of directors proposes allocating 5% of the profit for 2022, amounting to €13,148,273.65, to the legal reserve, distributing dividends of €150,000,000.00 to the shareholder pursuant to Legislative decree no. 112 of 2015 as subsequently amended and integrated and allocating the residual €99,817,199.41 to retained earnings.

Rome, 6 March 2023

The board of directors

The Chairwoman