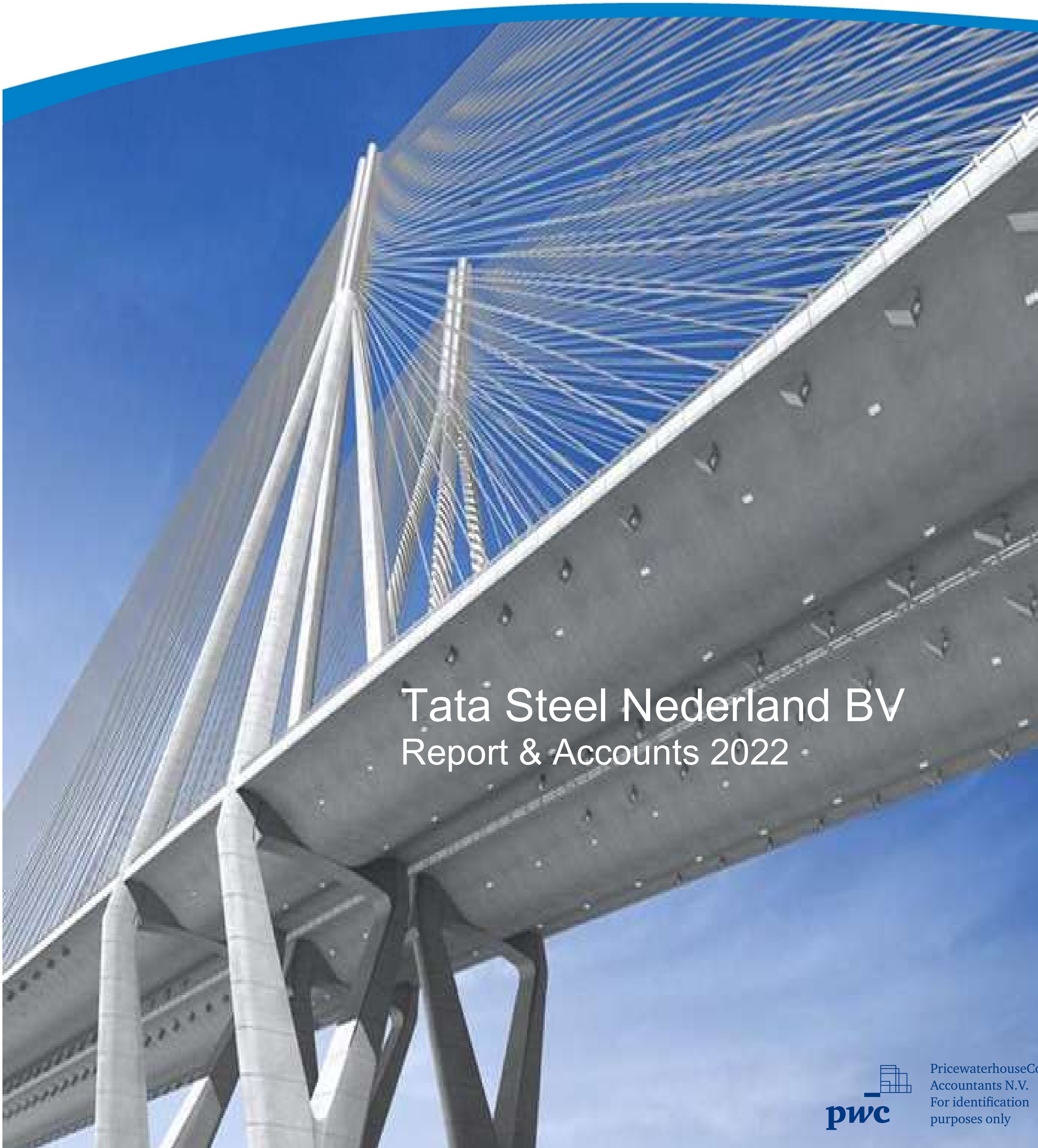
TATA STEEL

TATA



Tata Steel Nederland BV
Report & Accounts 2022

PricewaterhouseCoopers
Accountants N.V.
For identification
purposes only

Contents

A. Message of the CEO	Dear stakeholder	2
	Strategic journey and leadership	2
	Looking ahead	2
B. Report of the Supervisory Board	Introduction	3
	Composition of the Supervisory Board and its committees	3
	Meetings and activities	3
	Financial statements	4
C. Report of the Board of Management	Introduction	6
	Principal business activities	6
	Strategic activities	6
	Decarbonisation	6
	Dynamics of the business	7
	Macroeconomic environment	7
	Steel demand and production	7
	Raw materials and steel prices	7
	Trade	7
	Financial review	8
	Capital expenditure	8
	TSN Business review	9
	Research & development	10
	People	11
	Sustainability and environment	12
	Principal risks and risk management	16
	Composition of the Board of Management	21
	Prospects for 2022/23	21
	Post balance sheet events	21
D. Annual Accounts 2022	Consolidated income statement	22
	Consolidated statement of comprehensive income	23
	Consolidated balance sheet	24
	Consolidated statement of changes in equity	25
	Consolidated statement of cash flows	26
	Presentation of consolidated accounts and accounting policies	27
	Notes to the consolidated accounts	36
	Company income statement	60
	Company balance sheet	60
	Company 2022 accounts	61
	Presentation of Company accounts and accounting policies	61
	Notes to the company accounts	62
	Further notes to and signing of the annual accounts	65
E. Other Information		66
F. Independent Auditor's Report		67

A. Message of the CEO

Dear stakeholder,

Amidst the ongoing impact of COVID-19 on society, FY22 has been a year with record results, driven by strong demand from our customers across all our businesses, and higher steel prices.

At the same time, FY22 was an eventful year during which we separated the Tata Steel Europe (TSE) business into two businesses per 1 October 2021: Tata Steel Nederland (TSN) and Tata Steel UK (TSUK). TSN now consists of 20+ entities across Europe and the US, with approximately 11,000 dedicated employees that serve our customers in Europe and the rest of the world.

In September 2021, we announced our ambitious intent to transfer our IJmuiden operations from a traditional blast-furnace based operation into a DRI/REF hydrogen-based steel plant.

We cannot ignore the importance of steel. Our society is built on steel and everything we do is dependent on it – from cutlery for eating to white good products for washing, and from driving cars to housing solutions. Maintaining its own steel manufacturing is important for the Netherlands and the country's energy transition. This is only possible if we produce steel in a responsible and sustainable way, whereby we improve the impact on our environment as quickly as possible. We can only achieve this by a radical transition to non-coal based production technology and using innovative new technologies. We will work closely together with local and national authorities and our direct neighbours to become a green and circular steel manufacturer in a clean environment.

In May 2021, we announced to accelerate the execution of the Roadmap Plus Programme, a EUR 300 million improvement plan aimed at significantly reducing dust, noise and odour emissions, which will be finalised before 2024, except for the new facility designed to reduce nitrogen oxide emissions, which is planned to be operational in 2025.

Strategic journey and leadership

During the year, we have further developed and deployed our TSN strategy, inspired by our mission to become a green, clean and circular steel company. We expect our customers and other stakeholders to benefit from this in the months and years to come. The big transition from traditional to hydrogen-based DRI/REF steelmaking also requires a parallel transition in leadership. Therefore a leadership's culture of "Connect, Change and Care" has been and will continue to be developed.

I would like to thank our customers, suppliers, partners and parent company Tata Steel for their continued support over the past 12 months. And a special word of thanks to our employees for their fantastic contribution during another year of often difficult working circumstances due to the pandemic.

Looking ahead

I have great confidence in TSN's future and look forward to the next years during which TSN will further transition to a green, clean and circular steel company. Moreover, we will continue to address the concerns of our direct neighbours via our Roadmap Plus programme. With our strong product portfolio and commitment to operational excellence, we are well positioned to continue to serve the needs of our stakeholders and harvest success.

Hans van den Berg

CEO and chair of the Board of Management Tata Steel Nederland

B. Report of the Supervisory Board

Introduction

The Supervisory Board (hereafter: 'the Supervisory Board') supervises the policies pursued by the Board of Management (hereafter: 'the BoM') and the general course of affairs of Tata Steel Nederland B.V. (hereafter: 'TSN' or "Company"). The Supervisory Board takes into account the interests of all the Company's stakeholders, and advises the BoM thereon. The Supervisory Board regards good corporate governance as an essential foundation for the long-term success of TSN and the Tata Steel Group, and an essential element to the delivery of its strategy.

Composition of the Supervisory Board and its committees

The members of the Supervisory Board are appointed by the General Meeting of Shareholders in TSN, at the nomination of the Supervisory Board itself. The Supervisory Board and its members are not bound by any instructions and shall not receive a binding mandate. At least half of the members of the Supervisory Board are not in any way involved in the management or supervision of companies belonging to the Tata Steel Group. A quarter of the members of the Supervisory Board is female. The Supervisory Board will strive for equal representation with future appointments. The Supervisory Board appoints its chair from among its members. The chair does not have a casting vote. Every third member of the Supervisory Board is appointed considering the enhanced right of recommendation of the Central Works Council of TSN.

During the year Mr. P.M.M. Blauwhoff decided to step down as chair and member of the Supervisory Board with effect of 13 July 2021. The Supervisory Board herewith expresses its great appreciation for Mr. Blauwhoff as member and chair of the Supervisory Board and thanks Mr. Blauwhoff for his dedication and the way he represented TSN's interest during his four-year term. After Mr. Blauwhoff's departure, vice-chair Mr. Jonkhart temporarily took on the role of chair.

On 1 October 2021, the separation of TSN and TSUK took effect, as a result of which primary management and decision-making responsibility have moved from the TSE group level down to the Board of Management of TSN. Further to the separation and in view of important decisions lying ahead, including the decarbonisation of the IJmuiden site, TSN's ultimate shareholder Tata Steel Ltd. indicated to prefer a closer involvement of TSL. The Supervisory Board welcomed this closer involvement of TSL as it would serve the interests of TSN and its stakeholders. Consequently, Mr. T.V. Narendran, CEO of TSL, was appointment as member of the Supervisory Board as of 1 September 2021 for a period of four years. Mr. Narendran was subsequently appointed as chair. Thereafter, the Supervisory Board consisted of Mr. T.V. Narendran (chair), Mr. M.J.L. Jonkhart (vice-chair), Mrs. L.M.T. Boeren and Mr. H. Adam.

Following separation, the Supervisory Board decided to install an Audit Committee as a standing committee of the Supervisory Board. At least half of the members of the Audit Committee are not in any way involved in the management or supervision of companies belonging to the Tata Steel Group. The chair of the Audit Committee will not be the chair of the Supervisory board and will not in any way be involved in the management or supervision of companies belonging to the Tata Steel Group. At least one member of the Audit Committee will have competence in accounting or auditing. As of its incorporation, the Audit Committee consists of Mr. M.J.L. Jonkhart (chair) and Mr. H. Adam.

In July 2022 the terms of the independent Supervisory Board members Mr. M.J.L. Jonkhart and Mrs. L.M.T. Boeren will expire. The Central Works Council used its enhanced right to recommend reappointment of Mr. Jonkhart. The Supervisory Board nominated Mr. Jonkhart and Mrs. Boeren for reappointment for a term of four years during the next Annual General Meeting, which is expected to take place in July 2022.

Meetings and activities

<u>Supervisory Board</u>

The Supervisory Board held 7 regular meetings during FY22 and 7 extra meetings. With the exception of the regular meeting of 11 January 2022, all the Supervisory Board members were present at each of these Supervisory Board meetings. In addition, members of the Supervisory Board attended Central Consultative Meetings of the BoM and the Central Works Council, providing information on the meetings of the Supervisory Board. From time to time they interacted with management and members of the Central Works Council outside the formal meetings, both collectively and individually.

During the regular meetings, the Supervisory Board was briefed on developments regarding the company and its financial, business, operational and safety, health and environment performance, the status of the STAR investment schemes, the progress of the BF6 repair, the decarbonisation program, the Roadmap Plus programme and the relations with the regional community and the overall license to operate. The Supervisory Board also discussed the operational and financial risks and their mitigations. TSN's mid-term and long-term strategy were presented to and discussed with the Supervisory Board. Moreover, the Supervisory Board was updated on discussions between TSN and TSL on a financial framework concerning the deployment of surplus cash, in view of the decarbonisation investments.

The Supervisory Board discussed several recurring subjects, such as the impact of the COVID-19 crisis, HR related matters, operational and financial risk management, IT and IT related risks, the financial situation, internal and external audit activities and integrity and compliance.

Specific attention was paid to the following matters:

Decarbonisation
The Supervisory Board was kept informed on the development of the decarbonisation strategy for the IJmuiden site, which was discussed in several meetings. The Supervisory Board approved the BoM decision to focus on exploring hydrogen-based Direct Reduced Iron as the pathway to the decarbonisation of the IJmuiden site and to no longer pursue CCS (Carbon Capture and Storage) as an intermediate step for achieving TSN's 2030 CO2 reduction ambition.

Environmental matters
The Supervisory Board was kept informed on environmental matters related to the IJmuiden site, including several reports published by the RIVM and the decision by the Office of the Public Prosecutor to initiate a criminal investigation into Tata Steel and Harsco, further to the allegation that Tata Steel and Harsco would have intentionally and unlawfully released substances into the soil, air or surface water. The Supervisory Board was also informed on the decision to accelerate the implementation of the Roadmap Plus programme, a €300M investment programme aimed at improving local environmental performance by realising significant reductions of dust emissions, noise and odour pollution. The Roadmap Plus programme will now be finalised before the end of 2023, with the exception of the new facility designed to reduce nitrogen oxide emissions, which is planned to be operational in 2025. The Supervisory Board was informed that a number of the Roadmap Plus projects have been finalised, resulting in the IJmuiden site's PAH emissions to be reduced by 50% compared to 2019.

Separation TSN/TSUK
In January 2021, TSL confirmed that the separation of TSN and Tata Steel UK Ltd. would be pursued. Following this confirmation, the Supervisory Board and the BoM had bi-weekly meetings with the CEO and CFO of TSL to discuss, among others, the governance arrangements to apply after separation. In addition, in these meetings the Supervisory Board and BoM regularly informed TSL on developments regarding environmental matters and measures and discussed subjects related to the decarbonisation of the IJmuiden site. The separation of TSN and TSUK took effect as of 1 October 2021. The Supervisory Board rendered a positive advice on the appointment of Mr. Hans van den Berg as CEO of TSN and chair of the Board of Management and on the appointment of Mr. Tom Eussen as member of the Board of Management, after the separation.

Audit Committee

The Audit Committee meets twice a year. The Audit Committee undertakes preparatory work for the Supervisory Board's decision-making regarding the supervision of the integrity and quality of the Company's financial reporting and the effectiveness of the Company's internal risk management and control systems.

The Audit Committee discussed the external auditor's audit plan, reviewed the Audit & Assurance audit reports, the risk reports, the Annual Report & Accounts FY22 and the Audit & Assurance audit plan for FY23.

Financial statements

For the financial year 2021/22, the consolidated income statement shows a net profit after taxation of €730m compared to a net loss after taxation of €(139)m in 20/21, due to improved steel spreads.

Pursuant to Article 29 of the Articles of Association, we hereby present the Annual Accounts for adoption by the General Meeting of Shareholders of TSN. The auditors, PricewaterhouseCoopers Accountants B.V., have examined the Annual Accounts for 2022 and have issued an unqualified auditor's opinion. The members of the BoM and the Supervisory Board, after discussion with the external auditors, have approved these Annual Accounts.

We recommend that the General Meeting of Shareholders adopts the Annual Accounts for the financial year 2021/22 as presented, and discharges the members of the BoM and the Supervisory Board of responsibility in respect of their management and supervision respectively.

The Supervisory Board congratulates the BoM and all TSN employees with the achievements during the financial year 2021/22.

Supervisory Board

T.V. Narendran, Chair

IJmuiden, 30 June 2022

C. Report of the Board of Management

Introduction

The Board of Management (BoM) of Tata Steel Nederland B.V. (TSN or Company) herewith presents the annual report together with the audited accounts of TSN, and its subsidiary companies (together, the TSN Group), for the year ended 31 March 2022 ('FY22').

TSN is a wholly owned subsidiary of Tata Steel Netherlands Holdings B.V. ('TSNH'), a private limited liability company based in the Netherlands. TSNH is owned by Tata Steel Europe Limited ('TSE'), a private limited liability company based in the UK. The ultimate parent company is Tata Steel Limited ('TSL'), which is a public company incorporated in India with shares listed on BSE Limited (formerly the Bombay Stock Exchange Limited), Mumbai and the National Stock Exchange of India, and with global depositary receipts listed on the London and the Luxembourg Stock Exchanges.

The BoM hereby declares that, to the best of its knowledge, the Company's financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole.

The BoM would like to express its gratitude to all TSN employees for their contributions to the Company's performance in FY22 and their support to realise the result for the current year.

Principal business activities

TSN Group is one of mainland Europe largest steel manufacturers. TSN Group supplies high-quality steel products throughout the world in demanding markets such as construction, automotive, packaging and to manufacturers of lifting, mining and earthmoving machinery.

The principal activities of TSN Group comprise the Business Unit Tata Steel IJmuiden (BU TSIJ) and the Business Unit Tata Steel Downstream Europe (BU TSDE). TSN Group has production sites and steel service centres in the Netherlands, Belgium, Germany, France, USA and in other parts of Europe as well as a global sales offices network.

TSN's main subsidiary is Tata Steel IJmuiden B.V. ('TSIJ') that includes the integrated steelworks and rolling and coating operations in IJmuiden, Netherlands. Other subsidiaries cover various activities that serve markets such as building & construction, automotive, colour coated steels and packaging, both in Europe and the rest of the world.

Further information on TSN can be obtained from the company's website (https://omgeving.tatasteel.nl).

Strategic activities

Separation

On 13 November 2020 TSL announced that separate strategic paths would be pursued for the Netherlands and UK business and that the process to separate its Dutch activities consisting of TSN and British Steel Nederland International BV (hereafter: "BSNI") and Tata Steel UK had started immediately. In 2021, TSE, TSN and TSUK progressed with the plans to separate the businesses centred in the UK and the Netherlands into two 'Value Chains', each with their own governance structures to give them greater agility and management focus, while still benefiting from operating together under the Tata Steel brand and offering a coordinated approach to customers and suppliers. Following consultation with the works council, this organisational change (known as 'Separation') took effect from 1 October 2021 and created two businesses, one centred in the Netherlands but including manufacturing assets elsewhere in mainland Europe ('MLE') and the United States, along with other international sales offices (together 'the MLE Business') and the other one centred on the UK but also including manufacturing assets in Sweden as well as certain international sales offices (together 'the UK Business'). For TSN this means that as of 1 October 2021, primary management and decision-making responsibility have moved from the TSE group level down to the Board of Management of TSN. Following Separation, TSE's role is to provide financial oversight and assurance in relation to TSE and to support where necessary effective co-ordination between the two 'Value Chains'.

Decarbonisation

During the year TSN announced plans to pursue a fully sustainable future for its steelworks in IJmuiden by adopting a hydrogen route involving the introduction of direct reduced iron (DRI) technology which can make iron using natural gas or hydrogen before it is converted to steel in one or more electric furnaces.. These plans will be further explained in this report. More information can be found on https://omgeving.tatasteel.nl/.

Throughout the year TSN continued to build on its successful company-wide Transformation programme to improve the performance of the business, helping it to become more sustainable and enabling investments necessary to secure its long-term future. The programme generated operational cost performance improvements as well as value enhancement of the sales revenues.

Dynamics of the business

The steel industry is cyclical. Financial performance is affected by general macroeconomic conditions that set the demand for steel from downstream industries, as well as by available global production capacity, raw material prices and exchange rate relativities. As integrated steel players seek to maintain high-capacity utilisation, changes in margins across regions lead to changes in the geographical sales pattern. As a result, in addition to market developments in mainland Europe, changes in the global market for steel influence the financial performance of TSN.

Macroeconomic environment

Economic growth recovered in all regions of the world in 2021 after the economy was strongly impacted in 2020 by the COVID-19 pandemic. The recovery was strong despite continuing supply chain issues and COVID waves. Global GDP growth increased by 5.9% (2020: -3.4%). In China GDP growth accelerated to 8.1% (2020: 2.2%). Whilst China achieved strong GDP growth of 12.7% in the first half-year of 2021, the Chinese economy decelerated sharply in the second half, recording only 4.0% growth in the fourth quarter of 2021. The deceleration was mainly due to the weak real estate market and stagnant infrastructure investment, together with continued COVID waves. The EU economy grew by 5.3% (2020: -6.1%) and the UK economy by 7.4% (2020: -9.3%). The EU and UK economies recovered as vaccination allowed a progressive opening of the economies. In the first part of 2021, the economies rebounded strongly from the recession of 2020, but GDP growth decelerated in the second half due to increasing energy prices, inflation and supply chain issues.

Steel demand and production

Global steel demand increased by 2.7% in 2021 in line with the improving macroeconomic conditions (2020: 0.5%). Demand in China decreased by -5.4% (2020: 10.4%) as growth in the construction sector slowed down. Demand in the EU28 recovered by 16.8% (2020: -11.6%). In 2021 the steel-using industries in the EU experienced a strong rebound in output, which peaked in the second quarter. The recovery of automotive was particularly strong. However, issues with the supply chain (esp. shortage of semiconductors) negatively affected output in the automotive sector in the second half of the year.

In 2021 global steel production increased by 3.6% (2020: -0.1%). Steel production in China decreased by -3.1% (2020: 6.9%) and equated to 54% of global steel production. In the EU production was increased by 15.4% (2020: -12.0%) as idled blast furnaces were brought back online.

Raw materials and steel prices

The principal raw materials used in TSN's carbon steelmaking processes are iron ore, metallurgical coal and steel scrap. The market reference price for iron ore fines (China CFR 62%) increased in 2021/22 to US$154/t (+$26/t). The price was particularly high in the first half of the year with an all-time high in June 2021 of US$215/t as demand from Chinese mills was strong. The hard coking coal spot price (Australia FOB) increased to US$313/t (+$196/t). The price increased during the year due to a combination of strong seaborne demand from India, Japan, South Korea and Europe as industrial output improved, high demand for non-Australian coals from China and limited supply in the spot market. The price was at an all-time high of 594 US$/t in March due to the loss of supply from Russia as a result of the war in the Ukraine. The German benchmark scrap price (Sorte 2/8) increased to €437/t (+€196/t) compared to the previous financial year.

The price of CO2 increased in 2021/22 to €65/t (+€36/t), reaching an all-time high in February 2022 at €91/t. Increasing industrial output and reforms of the EU Emissions Trading System, reducing the supply of permits, have caused the price to rise.

The European steel spot Hot Rolled Coil price (Germany, parity point) increased in 2021/22 to €1,055/t (+€520/t). The price increased strongly as demand for steel was high whilst supply was limited. In March 2022 the steel price was at an all-time high of €1,240/t due to the loss of supply from Ukraine and Russia.

Trade

In 2021 imports into the EU increased to 30.3Mt (2020: 22.4Mt). High margins made it profitable for exporters to sell material in the EU. In 2021 the market share of imports in the EU increased to 18.6% (2020: 16.5%). The market share of imports in the EU is at a historical high.

The EU remains a net importer of steel with net imports of 10.9Mt (imports: 30.3Mt, exports: 19.4Mt). The region became a net importer in 2015.

Financial review

The Company's turnover increased from €4,347m in FY21 to €6,904m in FY22 primarily due to the strong recovery of the steel markets from FY21 which was impacted by the COVID-19 pandemic. The operating result reverses from a €(215)m loss in FY21 to a €914m profit in FY22 on the back of the improved steel spreads in the European steel markets. The result before taxation improved from a €(213)m loss in FY21 to a €921m profit in FY22. The consolidated net profit after taxation amounted to €730m, compared to a net loss of €(139)m in FY21.

Consolidated capital and reserves increased by €765m to €3,313m at the end of FY22.

The increase of €765m consisted of:

- Profit for the period of €730m;
- Other comprehensive profit for the year of €35m mainly attributable to profits arising on cash flow hedges and actuarial gains on defined benefit pensions.

Net cash flow from operating activities totalled €789m, an increase of €436m compared with FY21. Net cash flow from investment activities amounted to €(251)m (FY21: €(298)m). Including movements in cash flow from financing activities, the net movement in cash and cash equivalents amounted to an inflow of €517m (FY21: €38m inflow).

An important strength of TSN is its solid balance sheet, with only a limited level of borrowing.

TSN has a revolving credit facility in place, agreed in 2020, of €150m for three years (this facility may be extended up to a maximum of six years if certain conditions are met). This facility is for the exclusive use of TSN. TSN also has access to a €400m intercompany loan facility with Tata Steel UK Holdings Ltd ('TSUKH') and TSNH expiring on 1 April 2023.

At the end of the financial year, both the revolving credit facility and the intercompany loan facility are undrawn.

Depending on TSN's actual cash positions and its cash flow forecasts and considering the Company's Policy for Surplus Cash, various amounts have been lent to TSNH for various periods. The Policy for Surplus Cash will expire on 1 July 2022. No dividends were paid in FY22 (FY21: nil).

TSN's financial risk management is based upon sound economic objectives and good corporate practice, including fraud detection and mitigation. The Group's main financial risks are related to the availability of sufficient funds to meet its business needs, including the ability to continue the strategic investments in the Strategic Asset Roadmap Programme ('STAR') and meeting its sustainability ambitions. To manage this risk, the Group continues to focus on generating positive cash flows and keeping sufficient access to internal and external funding possibilities, including government support for decarbonisation investments.

Other financial risks relate to movements in interest rates, exchange rates and commodity costs. Derivative and other financial instruments are used to manage any exposures where considered appropriate. Further details of its financial risks, and the way the Group mitigates them, are set out in note 21.

Capital expenditure

Under the STAR significant capital expenditures are being made to support the strategic growth of differentiated, high value products in the automotive, lifting and excavating, and energy and power market sectors. Key STAR activities during 2021/22 included, in October 2021, the commissioning of a new continuous caster on the IJmuiden site. With the new installation, Tata Steel can produce an even wider range of advanced steels, including so-called 'advanced high strength steels' and 'ultra-high strength steels', which are super strong, but also very formable at the same time. This enables customers to make products that contribute to making society more sustainable. For example, car manufacturers can use these types of steel to design lighter and therefore more economical cars, which are at the same time even safer than the current models. Work on the cold mill upgrade progressed whilst the preparatory work on the revamp to Blast Furnace 6 at IJmuiden also continued. Alongside these, investments to support the Roadmap Plus programme are developed, aimed at creating a better living environment for the local community through extra measures and investments. This will significantly reduce the nuisance caused by dust, noise and odour in the coming years.

TSN Business review

Business Unit Tata Steel IJmuiden

On its 750 ha site on the Dutch coast, the Business Unit IJmuiden's fully integrated agglomerate, coking, iron and steel works manufactured 6,6mt liquid steel in FY22 (FY21:6,2mt). After further processing in its rolling and coating operations in IJmuiden, Ivoz Ramet (BE) and Duffel (BE) and supported by its global network of sales offices, the Business Unit delivered 5,8mt (FY21:5,6mt) hot and cold rolled, metallic-coated and tin-plated steels. These products went world-wide into the automotive, transport and packaging industries, the building and construction sector and to producers of electronics, consumer and general engineering applications.

Safety continues to be the BU's first priority as it strives to be the industry benchmark. The Lost Time Injuries (LTI) rate is a measure of safety performance, expressed as the number of incidents leading to absence from work per million worked hours. For the BU IJmuiden, the combined LTI rate for employees and contractors was 0.9, which is 0.5 better than last year.

The environmental performance of the BU has clearly improved, also reflected in the halving of the number of complaints received. Still the communities are worried by the emissions of the BU. The BU is executing an extensive program, the Roadmap+, to improve its performance on a very short time scale (2 years). The first projects have been delivered.

With steel markets strongly recovering from the COVID-19 pandemic impacted lows of previous year, favourable steel spreads and improving volumes allowed for a very profitable operating result in FY22, compared to an operating loss in FY21.

In FY22 the Business Unit has made significant and critical choices in its journey to become Green, Clean and Circular. This is extensively described in the section 'Sustainability and Environment' later in this report.

Business Unit Tata Steel Downstream Europe

At the various parts of our Business Unit Downstream Europe, steel is further processed for high-quality applications in specific market segments. With a wide range of processing options, the most challenging customer requirements are met.

The manufacturing sites of TS Building Systems provide a wide range of roofing, cladding and structural roof systems for the global building industry. Capacity was extended with a new wall panel line at the Geldermalsen (NL) site.

TS Tubes is one of Europe's leading manufacturers of welded steel tubes offering a wide range of products for application in greenhouses, construction projects, steel structures and the automotive industry.

TS Colors is an international business with significant experience in developing and manufacturing colour-coated pre-finished steels. Applications include building envelope, roof and wall cladding, domestic appliances, consumer products and specialist applications.

TS Distribution Europe comprises a network of service centres and further processing capabilities across Europe.

TS Plating specialises in the rolling, annealing and electrolytic plating of cold-rolled narrow steel strip and its downstream processing. The business is a world leading supplier of materials for the production of battery cases and its products are used for diverse applications in the automotive industry.

Compared to FY21, operating results improved considerably across the Business Unit Downstream Europe on the back of the economic recovery post-COVID, allowing for better margins and volumes.

Safety performance, expressed in number of Lost Time Incidents deteriorated in Building Systems (FY22:4; FY21:2) and Tubes (FY22:2; FY21:1), remained at zero in Plating and improved in Colors (FY22:3; FY21:4 and Distribution (FY22:0; FY21:1).

Research & development

Research & Technology programme

Approximately 76% of the TSN technology programme was developed under the governance of the Research Portfolio Committees ('RPCs') of TSN. The RPCs cover process and product market sector developments. The remaining capacity was primarily allocated to the Strategic Thrust programme [approx. 18%] for various projects including:

- HIsarna technology: Environmentally more friendly, low CO2 and economic ironmaking (at least 20% reduction without Carbon Capture and Storage (CCS), up to 80% with CCS or even negative with also renewable carbon sources). Engineering for upscaling (1 mln tonnes/yr demo plant) commenced and continued in FY22, in close collaboration with a dedicated team in Jamshedpur. The Reclamet project (using HIsarna for recycling Zn-coated steel scrap) awaits restart of the plant trials in the pilot plant. It is planned that the HIsarna pilot plant will restart early in the coming fiscal year which will give a boost to the activities;
- Physical vapour deposition: a "cold" zinc coating technology that allows an extension of TSN's zinc coated product range towards the future UHSS automotive grades well above 1000 MPa. Main focus was on continuous liquid feeding of zinc into the vacuum chamber. After careful consideration, the project is stopped in favour of higher priority work, at least until the market prospect improves in the future;
- Towards Sustainable Coke Production: aims at funding opportunities to use non-fossil carbon and non-coking carbon for coke making. A smaller scale test route has already been developed and further studies are on-going;
- Steel integrated PV (Photo Voltaic) products: focus of this project shifted towards the integration of existing (lightweight) PV on our steel products;
- DENS programme: cooperation with Universities to accelerate new product development on a small scale (300g to 25kg) to feed process modelling aimed at operational scale (300 tonnes);
- Heat recovery: looking at various ways to recover and re-use heat that is currently lost during our production processes. We work closely with the environment department of the site IJmuiden and will try to bid as well into a large European programme;
- Various developments on the blast furnace process, including modelling and experimental testing of ceramic materials, to prolong the operating times for blast furnaces beyond current limits; and
- Studies into alternative reductants and pre-reduced agglomerates have started.

Like last year, additional resources were also available for Direct Business support [approx. 5%] to deliver quick wins for the business, where R&D effort can make a difference, were increased. Furthermore, a special programme on decarbonisation has been created, in line with the company's goal to implement a green Hydrogen route in the near future. This programme will especially address the aspect of the new DRI based production route and will be there to support the shorter term preparations for the investments as well as for the longer term optimisation of the use of these installations.

Process development

The process technology programme in 2021/22 was focused on lean and robust manufacturing processes, better use of raw materials and resolution of quality issues. The programme supports the Group's manufacturing and differentiated product strategy. Key achievements during 2021/22 were:

- Introduction of flexible lubrication to improve our rolling processes;
- A new Hot Dip Process Simulator was added to support our coating developments;
- Several investigations into decreasing our environmental and societal impact, e.g. the minimisation of odour emissions from our burner installations, a new design of oxygen blow profiles to prevent slopping at our convertor processes, and investigations into how to prevent clogging;
- The castability of several new grades was assessed on feasibility to implement in our lines.

Product market sector developments

A key element of the Group's strategy is the development of new steel products. Structured programmes are initiated for all market segments identified by strategic marketing with particular emphasis on the automotive, engineering, construction and packaging sectors.

During 2021/22 a total of 10 new products were introduced into the Group's product portfolio. These included:

- 27 & 35MnB5 steels: high strength heat treatable BMn steels for agricultural applications in the Engineering-sector;
- Serica FLOTM: a new GI-based zinc coating for exposed panels for the Automotive-sector;
- HR-S355MC: HSLA grade with high impact toughness at low temperatures.

People

Pride

TSN's strength lies in its people and the pride they take in their work. Whether producing today's steel, researching tomorrow's new products, or working closely with customers to make them even more successful in their markets, the pride in the people who work in the steel sector drives everything the company does.

It makes all those who work for the company want to exceed customer expectations, invest in cleaner, safer and more sustainable processes, give back to the communities they live and work in, and build and maintain a company fit for generations to come.

Tata Values

TSN embraces the five 'Tata Values' which are shared by all Tata companies worldwide and guide expected behaviours and practices throughout Tata Steel: Pioneering, Responsibility, Excellence, Unity, Integrity.
TSN's purpose, values, vision, mission, strategy and key messages are communicated within Tata Steel across all levels in the organisation through regular internal communications, senior leadership conferences and weekly CEO update calls.

Health and safety

Health and safety continue to be TSN's first priority as it strives to be the industry benchmark.

TSN's safety performance in FY22 remained at an LTI-rate of 1.21 compared to FY21.

Health and safety improvement plans continue to be deployed across the sites, including deployment of approved Health and Safety standards and codes of practice.

The sickness rate of 5,4% is slightly higher than the 4,80% in the year before, mainly due to the Corona virus. There has been good cooperation between company unions and works councils regarding COVID policy and cases of illness, ensuring business continuity

The average age of our workforce is increasing and, due to the higher retirement age, employees will have to continue to work to a higher age than before. This calls for policies aimed at improving both the ability and the willingness to continue to work longer. An example is the retirement Generation Pact program. Tata Steel and the Trade Unions recognise the importance of employees reaching retirement in a good and healthy way. The Generation Pact offers the opportunity to work less to reduce the workload in the last years before retirement.

Pension scheme

Stichting Pensioenfonds Hoogovens (SPH), the main pension scheme within TSN, operates the pension scheme of the IJmuiden site in the Netherlands. At the end of its reporting year 2021, SPH had 9.681 'active' participants and 14.473 people receiving pensions, an increase of 62 and a decrease by 100 respectively. The 12-months moving average ('policy') funding ratio has increased from 105% by the end of March 2021 to 121.5% at the end of March 2022, driven by good returns on investments and an increase of the interest level. The company has agreed with the Dutch Trade Unions to fix the Company's contribution level at 29.5% of pensionable earnings for the period 1 January 2022 to 31 December 2022, which is similar to 2021. The pension scheme is classified in the financial statements as a defined contribution scheme.

Employment policies

There are established arrangements for communication and consultation with Works Councils and Trade Union representatives, to share information on matters of mutual interest. During the year several requests for advice on organisational and financial subjects were discussed and concluded with the Central Works Council.

In 2022 a new TS IJmuiden collective labour agreement was agreed with the Trade Unions for an 18-month period from 1 April 2022 up to 30 September 2023. During this period, TSN employees will on average enjoy a wage increase of 6% in a mix of structural increases and a number of one off payments. It was also agreed that the Generation Pact would be extended for another two years.

Sustainability and environment

Green, Clean and Circular Steel

TSN has set out its mission to build the leading European steel business that is sustainable in every sense. It aims to play a positive role in shaping a sustainable society for generations to come.

TSN's strategic goal is to manufacture and supply Green, Clean and Circular steel, following a two-pronged approach:

- TSN has the overarching ambition to be a CO2 neutral steel producer by 2050, striving to accelerate the use of hydrogen and with an intermediate target to reduce CO2 emissions of the IJmuiden site by 30% compared to 2019 by 2030.
- Minimising the environmental impact on the communities in the surroundings of our operations - in particular those in IJmuiden- remains TSN's other leading sustainability commitment. The Roadmap Plus programme in IJmuiden has accelerated the delivery of significant improvements in terms of dust, odour and noise emissions in 2021 and will be vigorously pursued in the year to come.

Clean environment

Community concerns and challenges

Residents around TSN's IJmuiden steelworks remain concerned about the impact of the steelworks on local environmental conditions. This is also reflected in the 2.336 complaints that TSN received from members of the community around IJmuiden during the financial year, primarily related to complaints on odour, noise and dust. Compared to FY21, during which 4.184 complaints were received, in particular the number of odour complaints reduced strongly.

During 2021/22, the RIVM (Dutch Institute for the Environment and Public Health) has issued three research documents regarding TSN's IJmuiden operations:

- An interim report on public health in the IJmond area with a focus on acute (instead of chronic) health issues in April 2021. RIVM concluded that there are peak values in which fine dust levels are higher around IJmuiden than in 'natural areas' and that General Practitioner (GP) visits for certain acute health issues are on average higher in the IJmond area than in two reference areas. RIVM did not determine whether peak fine dust levels and increased GP visits were attributable to the activities of TSN but called for more research. In response to this report, three municipalities and the Provincial Authorities have called upon TSN to communicate clearly what measures it intends to take to address the concerns, albeit that they have acknowledged that TSN is generally operating within the requirements of its permits.
- The second report, issued in September 2021, addressed the composition of deposited dust in the IJmond region. The RIVM concluded that the levels of PAH and lead were higher than outside the IJmond region. TSN is strongly committed to continuously enforce compliance and to minimise the impact of the operations on the environment. Tata Steel responded to this report by expanding and accelerating the Roadmap Plus actions in this domain.
- The third RIVM report, issued in January 2022 was on the origins of the substances found in the IJmond region. The RIVM concluded that emissions in the IJmond region deviate from what Tata Steel had reported. TSN is currently actively engaging with experts within the RIVM to assess the differences in measurements as reported by the RIVM. TSN has indicated that the measurements of the emissions by Tata Steel are accredited and that the measuring programme is assessed and verified by the competent authorities on an annual basis.

On 26th April 2021, the Dutch Safety Board announced that it will investigate the effect of industrial emissions on public health in general, starting with an investigation into the TS IJmuiden steelworks. The goal of the Board is to obtain learnings for society at large and not to apportion blame to individuals or organisations.

On 19 May 2021 a criminal complaint was filed with the public prosecutor against Tata Steel and its de facto managers on behalf of about 800 claimants. The allegation implies that Tata Steel and another party are responsible for deliberate air and soil pollution with risks for people's health. The allegation has attracted substantial media attention, both regionally and nationally. In January 2022 the prosecution office announced that it will start an investigation.

Roadmap Plus

In December 2020 TSN's IJmuiden operations launched the Roadmap Plus programme, a large-scale investment programme of over ~€300M intended to significantly improve local environmental performance on areas such as dust, noise and odours. The Roadmap Plus programme comprises a large number of concrete measures that will address (i) nuisance created by odour and coarse dust, (ii) the impact on local air quality of fine dust, substances of Very High Concern (e.g. PAH, lead) and NOx and, (iii) eutrophication and (therefore) biodiversity impacts created by NOx deposition.

On 25 May 2021 TSN announced to accelerate these plans to significantly reduce dust and odour emissions from IJmuiden steelworks by:

- Reducing dust emission to the surrounding community by 65% by 2023;
- Reducing odour pollution by 85% over the next two years;
- Building a new facility by 2025 to reduce nitrogen oxides, fine dust and heavy metals from the pellet plant.

The publication of Roadmap Plus represents a major step forward to show Tata Steel's commitment to the environment to respond to community concerns. The response to the Roadmap Plus was positive in local and national media and by the provincial authority and national government. Though TSN's initiative was received positively, the Wijk aan Zee community remains sceptical and focusses on TSN achieving the goals set before confidence can be restored.

Roadmap Plus contains new measures to reduce dust emissions. An important measure in reducing visible dust is the reduction of dust turbulence at agglomerate yards and turbulent flow of raw materials during transport on conveyor belts. This is planned to be achieved by building dust screens and covering the bunkers of the Blast Furnaces as well as the transport systems for raw materials. In addition, covering the steel converter slag cooling process is expected to make an important contribution to dust reduction. By 2023, the company aims to reduce emission levels in the immediate community around by approximately 65 per cent compared to 2021.

The odour sources with a major impact on the surrounding area are from processes as the Coke and Gas Plant 2 (CGP2), the ladle fire-up installation at the Steel Plant and Pickling Line 22 at the Cold Mill. In addition to the planned acceleration of all odour-reduction measures, TSN will also take extra measures within Roadmap Plus, such as a plan to accelerate improvements to CGP2, including adjustments to the mechanical seals. Another measure which has been added is the installation of a new scrubber at Pickling Line 22. With the extra measures, odour issues experienced by the surrounding community are expected to reduce by approximately 85 per cent in 2023.

A major project within the Roadmap+ package is the planned building of a dedusting and 'DeNOx' installation at the Pellet plant in IJmuiden, which is expected to significantly contribute to the reduction of emissions. In addition to reducing nitrogen oxides (NOx), the new facility will also reduce emissions of particulate matter and heavy metals, in particular lead, by 55 per cent.

By taking various measures against the emissions of Substances of Very High Concern (SVHC), Tata Steel Netherlands expects to achieve a 50 per cent reduction in the emission of Polycyclic aromatic hydrocarbons (PAH) by 2023.

Tata Steel Nederland always strives to comply with permits and legal standards. The Roadmap+ program and the acceleration of the Roadmap+ plan cover actions which extend beyond and sometimes far beyond the scope of current permit requirements. TSN deems this an essential acceleration, since it focuses on measures which have the largest possible positive impact on the local communities and the local environment.

TSN has already made significant improvements in reducing dust emissions in the first year of the (original) programme, including finalising a new facility for processing iron residues, as well as paving unsealed roads on site. New water suppression systems have been installed on raw material storage areas to reduce dust. A variety of operational measures have been taken to address noise, including reducing locomotives' emergency signals. In order to understand better the sources of malodour, additional electronic 'noses' (e-noses) have been deployed across the site and a pilot project has been commenced with the Province to exchange data from various e-noses.

In our Roadmap Plus project we already have the intention to reduce 50% of PAH emissions in 2023, 35% PM10 (fine dust) and 40% odour in 2023 and 30% NOx in 2025 all compared to 2019 emissions. Realising our decarbonisation plans will facilitate the replacement of existing factories by new and cleaner technologies. This will allow us to reduce our local emissions even further.

More information can be found on https://omgeving.tatasteel.nl/tata-steel-en-omgeving/roadmap-plus/.

Environmental production and product standards

To support its environmental ambitions, TSN continuously strives to improve the systems that are in place to manage and minimise the effects of its operations. For example, 100% of its manufacturing operations in the Netherlands are independently certified meeting the international environmental management system standard, ISO 14001:2015. Furthermore, 100% of TSN's products manufactured in the Netherlands are independently certified meeting the requirements of the sustainable sourcing standard, BES6001.

Green and Circular Steel

Decarbonisation technology

In September 2021, TSN has announced that it will no longer explore the Carbon Capture, Utilisation & Storage technology but will fully focus on exploring the DRI technology of producing steel based on hydrogen instead of coal. This implies the replacement of blast furnace technology by a combination of DRI technology and electric furnaces. The DRI technology is a technique whereby iron ore is no longer reduced in a blast furnace, but in a DRI plant. Unlike a blast furnace that uses coal, the DRI plant uses natural gas or hydrogen. The reduced iron is then further processed into liquid hot metal in an electric furnace..

The transition to green steel is expected to take place in a two-step approach. When the first DRI-installation with electric furnaces comes on stream, targeted for 2030, the first blast furnace and coke and gas plant will be idled. In the second step, after installing further DRI and electric furnace capacity the remaining blast furnace and coke and gas plant and the sintering plant will be idled. When both blast furnaces are replaced by DRI plants, the use of coal can be largely stopped.

As a result, the CO2 emissions from the steel making process will be considerably lower. In parallel, recycled scrap metal will be used to enable steel making in IJmuiden to become more circular.

The production process of the DRI technology is also easier to start and stop, leading to lower energy consumption than the blast furnace process. DRI technology enables the production of high-quality steel at a significantly lower CO2 emissions and is also easy to connect to the other mills on our site.

Tata Steel has a good starting position for a successful transition to green steel in a clean environment. We will benefit from our coastal location, giving access to off-shore wind energy coming on-shore (TenneT) and being well situated to connect to the natural gas- and future hydrogen grids.

More information can be found on: https://omgeving.tatasteel.nl/duurzaamheid.

Joint effort with Government

The Expression of Principles between TSN and the Dutch Government that was agreed in 2021 lays down a framework for mutually beneficial cooperation and dialogue on how decarbonisation plans could be realised.

TSN is supportive of the strong leadership position on climate action that the Dutch Government has taken. It is committed to working closely with policymakers to deliver an important contribution to the achievement of national aspirations, as evidenced by its emission reduction commitments.

However, driving climate change is a major effort that concerns the whole of society and accelerating the pace of decarbonisation of the steel sector will require a set of policy interventions that rapidly strengthen the business case for public and private investment in low-CO2 steel.

Similarly, customers of steel are expected to be prepared to contribute to the transition to green steel by paying a Green Steel premium.

It would be counter-productive if the cost of decarbonising TSN's steelmaking operations in the Netherlands were to give a competitive advantage to steelmakers in less carbon-constrained jurisdictions; policy measures are thus needed to enable TSN to remain competitive whilst pioneering the steel sector transition to net-zero. These measures should take the form of public procurement and product policies that incentivise the use by society of low-CO2 steel, measures that accelerate the deployment of clean energy infrastructure and, critically, interventions that ensure TSN can access government financial support and/or low-cost finance facilitate high-risk, innovative and first-of-a-kind technologies.

TSN is supportive in principle of the EU's proposed Carbon Border Adjustment Mechanism but care will be needed in its design if it is to have the intended effect of incentivising rapid decarbonisation amongst EU steelmakers.

TSN's ability to realise its ambition to become a green and circular steel producer within the aspired timelines, is critically dependent on adequate and timely support from government in terms of financial support, granting of permits and maintaining a level playing field for European steel makers.

Hydrogen

TSN is assessing the feasibility of a green hydrogen plant at the TSN site in IJmuiden. The availability of green hydrogen would also have advantages for the entire Amsterdam metropolitan region as TSN would not be the only party to benefit from this new resource.

HIsarna

The Company continues to work on a major long-term project to develop HIsarna, a new reduction technology for which it co-owns the intellectual property rights, to produce steel without the need for coke making or agglomeration processes, thereby improving efficiency, reducing energy consumption and reducing CO2 emissions. The pilot plant is located at IJmuiden. The technology development plan for HIsarna is based upon a stepwise scale up from the current pilot plant in Ijmuiden via a larger installation, planned in Jamshedpur in India.

CO2 Emissions Performance and Energy efficiency in the short term

Even with TSN's decarbonisation activities moving forward at pace, it is nevertheless still important to ensure that its assets remain highly efficient in the short term. Currently, IJmuiden is one of the most carbon efficient integrated steelworks in the world. With respect to low CO2 emission per tonnes crude steel the IJmuiden site is ranked number 2 in the 2021 WSA benchmark, out of 34 steel companies.

Whilst TSN already operates its steelmaking assets close to their theoretical optimum levels, it remains committed to making marginal gains wherever the opportunity arises to do so and continues to invest substantially in evaluating and optimising its processes. It has continued to enhance MONICA, the state-of-the-art monitoring and benchmarking tool for energy and CO2 emissions developed in-house.

The follow up of the MEE called the Energy Efficiency Directive scan (EED) is held for the IJmuiden steelworks. To fulfil the EED, TSN is upgrading the office buildings to Energy Label C, replace diesel powered transport vehicles for electric ones. Other key developments during 2022 included the revamp the Pickling line 21 to connect it to the cold mill 21 and further expand the local waste heat distribution system to reduce natural gas use. During 2022, TSN plans to commission the new highly efficient reheating furnace at the hot rolling mill as well as energy efficient electrical drives. A variety of waste heat recovery schemes and electrification steps are to be implemented in the following years, including a new waste heat recovery boiler at the sinter plant.

Emissions Trading and Dutch carbon tax

The allocation of CO2-credits to the operations of TSN under the EU Emissions Trading System (EU ETS) continues to be lower than the emitted volume in 2020, the final year of Phase 3 of the system, with the shortfall between free allowances and actual emissions exceeding 1.6 million tonnes of CO2, despite IJmuiden being amongst the most carbon efficient integrated steel plants in the world.

The price increase of EUAs continued during the FY 2022 and rose from over €40 in April 2021 to €76 in March 2022. The price growth was attributable to a number of factors, from the growing number of investors seeking exposure to the EU ETS, to upcoming measures to tighten the system to align it with the EU's increased 2030 emissions reduction target, to the transition from Phase 3 to Phase 4 of the EU ETS.

Increasing shortages and rising prices of EUAs mean that steelmakers need to deal with growing costs of carbon while also investing in a decarbonised future. During 2021, TSN has introduced a carbon surcharge mechanism to pass on costs to the market. By explicit carbon pricing, TSN is seeking to drive awareness and action in the value chain towards innovation and investments in a decarbonised future.

As part of the national CO2-reduction plan of the Netherlands, a number of policy measures have been introduced in addition to EU ETS for both industrial and electricity generation sectors including a minimum carbon price for power generation and a carbon tax for industry, which came into effect on 1st January 2021. The carbon tax has the effect of supplementing the price of EU emissions allowances (EUA) in the EU ETS if they fall below a pre-determined and increasing annual threshold linearly from €30/tCO2 in 2021 to €125/tCO2 in 2030. A number of dispensation rights apply to ensure companies only pay the tax on a proportion of emissions above a defined threshold linked to ambitions of the Dutch government to achieve a 49% reduction in CO2 by 2030 (compared to 1990) and to the EU-ETS benchmarks.

TSN product contribution to climate change

Decarbonisation of TSN's operations is only a part of the positive contribution that TSN is making, as its products are also part of the solution to climate change.

Steel is a vital part of modern society and is essential for sustainable development. It is needed to make vehicles lighter and more efficient whilst helping to shape future forms of mobility. It will be a fundamental building block of the carbon neutral cities of the future. Its use in innovative packaging solutions underpins resilience within the food supply sector. Steel is also at the heart of renewable electricity generation and transmission and will play a crucial role in the upscaling of hydrogen production and conveyance. As a strong, durable, flexible and infinitely recyclable material, steel will be at the heart of the future circular economy, in which resources are used with great efficiency, leading to the elimination of waste.

CO2 emissions in steel production can be offset by reductions in direct and indirect emissions through the life cycle of steel products, achieved through effective product development and design, and through recycling at end-of-life. TSN has developed a tool to assess the sustainability of all new products against the products they replace, in a semi-quantitative manner. The Sustainability Assessment Profile is a unique framework supporting the company's mission to become sustainable in every sense, creates value propositions related to sustainability and supports customer engagement. The framework considers environmental, social and economic aspects over the complete product life cycle in a consistent manner in an approach that puts TSN ahead of other international steel companies.

From a results perspective, during FY22, TSN launched 10 new products across Automotive, Construction, Engineering and Packaging sectors. Of these seven were assessed as Eco and two as Eco-Premium products, offering significant sustainability benefits over the baseline products they replaced. Notable developments include Heavy Gauge Hilumin® for Electric Vehicle (EV) battery application which has more than 45% sustainability benefits over existing battery quality steel. The product enables faster growth in EV adoption offering more energy content in the cells leading to lesser material consumption throughout a battery's life cycle. In the Construction segment we launched an improved Contiflo® range of Tubes which removes solvents from the coating process and reduces health impact in manufacturing and use. From the Engineering segment, 38MnB5 used for agricultural machinery application offers up to 25% increase in sustainability benefits due to lower carbon content in the product.

Principal risks and risk management

Within the wider TSE group, active risk identification and mitigation management is an integral part of all business management processes.

Building on the risk management procedures and reporting framework that are applied throughout TSE, TSN has a robust process to identify and monitor the significant risks and associated mitigating measures for its operations and activities.

Risk registers that are prepared by the individual entities of TSN are consolidated in an overall TSN risk register, highlighting potential impact of the risks as well as probability of occurrence. The TSN risk register is updated quarterly.

Critical risks can be summarised as follows:

Risks	Mitigating factors
Environmental compliance	
TSN's businesses are subject to numerous laws, regulations and contractual commitments relating to the environment and regulatory compliance in the countries in which it operates. For TSN's steel making activity in the Netherlands, it is critical that Dutch regulations do not develop in such a way, that they disturb the 'level playing field between TSN and other European steelmakers. TSN's "license to operate" depends on the balance that it achieves between the value of its products and services to society, the jobs it creates, the contributions it makes to communities and local economies, and its environmental footprint. Environmental issues, such as dust emissions in the vicinity of TSN's manufacturing sites, are key areas of concern for local communities which may negatively harm TSN's "licence to operate". Environmental issues, such as dust emissions in the vicinity of TSN's manufacturing sites, are key areas of concern for local communities which may negatively harm TSN's "licence to operate".	TSN has policies, systems and procedures in place aimed at ensuring compliance. There is a strong commitment from the TSN BOM and Supervisory Board to continuously enforce compliance and to minimise the impact of the operations on the environment. Dedicated Senior Management resource is in place to drive the improvement in this area. The EUR 300m Roadmap Plus programme is being implemented as a priority to significantly improve local environmental performance on areas such as dust, noise and odours. The latest project to be realised as part of the Roadmap Plus initiative is the dedusting and DeNOx installation at the Pellet plant. This installation will reduce the emissions of lead, heavy metals and dust at the Pellet plant by approximately 80% in 2023 compared to 2019. TSN is actively engaging with local communities close to its manufacturing operations (e.g. by the public Information desk in Wijk aan Zee) in order to respond to their concerns regarding TSN's activities. TSN's operations and procurement strives to minimise environmental impacts by selecting raw materials on its environmental credentials as well as on quality and price.

Risks	Mitigating factors
Climate change and decarbonisation	
Society at large is putting strong pressure on the steel industry, and therefor also on TSN, to make step changes in CO_2 emissions. These step changes inevitably require very large capital investments in new production technologies and may lead to structurally higher production cost compared to current levels. Inability to raise sufficient finances for such a decarbonisation programme as well as potential cost disadvantages in the absence of a level European playing field may cause a situation where TSN is not able to meet long term sustainability objectives, leading to prohibitively higher carbon emission costs and taxes and demand losses from carbon conscious customers. For the steel industry, transition risks include increased unit costs within Emissions Trading Systems and a reduction in the free allocation of CO_2 allowances under those schemes. In the future the allocation of CO_2 allowances is likely to be substantially lower than projected emissions, which potentially exposes TSN to higher operating costs. In addition, steel producers in the Netherlands are subject to a Netherlands specific carbon tax which, under certain conditions, may come on top of any EU Emissions Trading Systems costs. Carbon taxes continue to absorb additional resources when compared to competitors not subject to the same legislation. Climate-related risks also include physical risks such as those linked to rising sea levels and extreme weather events (e.g. storms, flooding, droughts, severe winds).	In September 2021, TSN has announced that it will focus on exploring the DRI technology of producing steel based on hydrogen instead of coal. This implies the replacement of blast furnace technology by a combination of DRI technology and electric furnaces. As a result, the CO_2 emissions from the steel making process will be considerably lower. In parallel, recycled scrap metal will be used to enable steel making in IJmuiden to become more circular. Customers are signalling that they are interested in procuring 'green' steel that may trigger, at least in the coming years, a price premium. TSN is working in partnership with the government on the shared objective of creating an achievable, long-term plan to support the steel sector's transition to a competitive, sustainable and low carbon future. TSN's ability to realise its ambition to become a green and circular steel producer within the aspired timelines, is critically dependent on adequate and timely support from government in terms of financial support, granting of permits and maintaining a level playing field for European steel makers. Future regulatory changes may include a EU Carbon Border Adjustment Mechanism which would help protect European steel producers from imports from countries that are not subject to the same level of carbon taxes. In 2021/22, TSN has successfully started to pass on costs of carbon taxes to customers in the form of an additional surcharge which will be adjusted when carbon costs change. TSN believes in transparency in pricing of its steel products and believes that end customers and society recognise that decarbonisation is likely to involve higher costs.
Our workforce	
Reputational risk, in particular from the environmental issues that are widely published in the public domain, may reduce TSN's attractiveness as an employer of choice. Maintaining a critical mass of engineers and other specialist functions remains a challenge within TSN due to the demand for these skills in the locations in which the business operates.	Active communication strategies are deployed to counter the reputational issues and to enhance the TSN brand. Strategic collaborations continue with Technical Universities and other relevant schools and talent programmes for graduates, functional trainees and apprentices to improve quality and retention. The IJmuiden 'Bedrijfsschool' provides dedicated vocational programmes for future technical and engineering employees..

Risks	Mitigating factors
Trading in the global steel market	
Despite measures being in place to support EU producers, vulnerabilities remain as safeguards to manage volumes do not address prices. The surge in imports in recent years forced TSN and other EU producers to pursue antidumping actions, investigation of unfair imports and imposition of trade remedy measures. Furthermore, the Tariff Rate Quotas (TRQs) set a cap on imports, but at a high level which varies by product, and are based around historical EU imports, when demand was higher than today. TSN's operations are predominantly based in Europe, which is a relatively high-cost area where demand growth for steel products is lower than in developing parts of the world. Increasing costs from climate change requirements, raw material costs and competing materials challenge TSN's long-term competitiveness.	TSN's commercial strategies aim to identify and pursue opportunities to focus on less import sensitive sectors/markets, on differentiated products and on a strong customer focus that will foster longer term relationships. TSN continues to monitor import activity (volume and prices) to track anti-dumping risks and works with Eurofer to monitor need for additional trade defense measures to protect EU steel industry from threat of injury from "dumped" steel import. To maintain cost competitiveness, TSN is developing a number of initiatives including cost reduction measures and business specific improvement plans.
Performance and operations	
Aging assets and periods of cash limitations restricting repair and replacement, may cause an increased likelihood of asset failures and unplanned downtime, leading to significant business disruption to the TSN supply chain. Loss of availability, integrity or confidentiality of Operational and Information Technology (OT/IT) may cause significant business disruption to the TSN supply chain.	Best practices in asset management, enhancing technical knowledge and skills, improving process safety, targeted capital expenditure and focused risk management are priorities for the business, e.g. the Maintenance Action Programme in IJmuiden. CAMF asset management process activities are accelerating/delivering an improved insight into the assets in relation to reliability, failure and risk. There is a robust TSN CapEx process in place with focus on Health, Safety and Environment priorities as well as on essential replacements like the BF6 reline in 2023. IT development processes and procedures are in place to maintain a reliable IT operating landscape.

Risks	Mitigating factors
Raw materials and energy	
TSN has no access to captive iron ore and coal supplies, therefore access to and pricing of raw materials supplies depend, to a large extent, on worldwide supply and demand relationships, notably iron ore, metallurgical coal and scrap. Exposure to raw material and energy shortages has not been a high risk historically, though is going to need to be managed effectively for a period of time following the impact of the COVID-19 pandemic and sanctions placed on Russia following the start of the war in Ukraine. Supply disruption of raw materials beyond existing buffer stocks could arise, either from quarantine of the vessels if they come from high-risk countries, or disruptions and restrictions in the country of origin of raw materials.	Active exploration of opportunities to get more value out of supply contracts by strengthening partnerships, better payment terms and leveraging the buying power of the wider TS Group to lower purchasing and inbound freight costs. Exposure to current energy shortages and price increases are closely watched and partly mitigated by long term price hedging. TSN has stopped the procurement of Russian coal and replaced it with supply from other countries.
Exchange rates	
Whereas TSN revenue is mainly Euro denominated, most raw material purchases, esp. ore and coal, are mainly denominated in US dollars. In general, a strengthening of the Euro reduces the Euro value of export revenues, it improves the relative competitiveness of steel producers in countries with weaker currencies enabling them to discount prices in the EU market, and it exposes customers to similar pressures leading to a reduction in demand for steel in the EU. In contrast, a strengthening of the Euro reduces the Euro cost of the raw materials, which are purchased predominantly in US dollars.	TSN operates a hedging policy to minimise the volatility of rapid and significant movements in these exchange rates. TSN is also actively diversifying its geographic customer base which helps mitigate dependence on currency zones.
Digital resilience	
There is an ongoing threat of cyber-attacks from large scale criminal activities, targeting major businesses across all industries. The evolution and ever-changing cyber environment require new and constantly evolving controls to manage an increasing risk exposure, exploiting new technology and maintaining existing hardware at all levels.	TSN has a dedicated Information Security department that drives a continuous focus on cyber risk awareness and education. Protection against viruses, malicious software and external hacking is in place as well as contingency planning for digital business critical components and core network components. A Top-10 cybersecurity risk programme is in execution, supported by external experts and the TS India IT department. A Central Security Operations Centre is in place in IJmuiden to manage local security incidents and event detection.

C. Report of the Board of Management

Composition of the Board of Management

Since Separation on 1 October 2021, the BoM consists of Mr. J. van den Berg (chair), Mr. J.E. van Dort and Mr. T Eussen. During the financial year FY22, Mr J. van den Berg and Mr J.E. van Dort were also the statutory Directors of TSN BV.

Prospects for 2022/23

For 2022 the outlook is highly uncertain due to, among others, but not limited to, the war in the Ukraine. The war in the Ukraine has a major impact on the EU due to its reliance on Russian energy and its geographic proximity to the conflict area. There are further downside risks from COVID virus infections, inflation and rising interest rates. The World Steel Association predicts that steel demand will increase 0.4% globally. Demand in the EU28 is expected to decline by 1.3%.

Post balance sheet events

On 1 April 2022, the Group completed the sale one of its subsidiaries, Tata Steel France Bâtiments et Systèmes SAS.

On 24 June 2022, Mr. T. Eussen was appointed as statutory Director of TSN BV.

Board of Management

J. van den Berg, Chair

J.E. van Dort

T. Eussen

IJmuiden, 30 June 2022

Consolidated income statement

For the financial year ended 31 March

	Note	**2022 €m**	2021 €m
Revenue	1	**6,904**	4,347
Operating costs	2	**(5,990)**	(4,562)
Operating profit/(loss)		**914**	(215)
Finance costs	5	**(10)**	(10)
Finance income	5	**4**	6
Share of post-tax results of joint ventures and associates	10(iii)	**13**	6
Profit/(loss) before taxation		**921**	(213)
Taxation	6	**(191)**	74
Profit/(loss) after taxation		**730**	(139)
Attributable to:			
Owners of the Company		**730**	(140)
Non-controlling interests		**-**	1

All references to 2022 in the Financial Statements, the Presentation of accounts and accounting policies and the related Notes 1 to 36 refer to the financial year ended 31 March 2022 or as at 31 March 2022 as appropriate (2021: the financial year ended 31 March 2021 or as at 31 March 2021).

Notes and related statements forming an integral part of these consolidated accounts appear on pages 27 to 59.

Consolidated statement of comprehensive income

For the financial year ended 31 March

	Note	2022 €m	2021 €m
Profit/(loss) after taxation		**730**	(139)
Items that will not be reclassified subsequently to profit or loss:			
Actuarial gains on defined benefit pension and other post-retirement plans	31	**22**	3
Income tax relating to items not reclassified		**(6)**	-
Items that may be reclassified subsequently to profit or loss:			
Gains arising on cash flow hedges	21 (iv)	**21**	31
Exchange rate movements on currency net investments		**4**	(2)
Income tax relating to items that may be reclassified	21 (iv)	**(6)**	(7)
Other comprehensive income for the year net of tax		**35**	25
Total comprehensive income/(loss) for the year		**765**	(114)
Attributable to:			
Owners of the Company		**765**	(115)
Non-controlling interests		**-**	1

Notes and related statements forming an integral part of these consolidated accounts appear on pages 27 to 59.

Consolidated balance sheet

As at 31 March	Note	2022 €m	2021 €m
Non-current assets			
Goodwill	7	**8**	8
Other intangible assets	8	**74**	105
Property, plant and equipment	9	**2,130**	2,065
Equity accounted investments	10	**52**	39
Other investments	11	**6**	6
Other non-current assets	12	**3**	3
Retirement benefit assets	31	**1**	-
Deferred tax assets	23	**125**	78
		2,399	2,304
Current assets			
Inventories	13	**1,738**	943
Trade and other receivables	15	**1,094**	782
Current tax assets	14	**93**	89
Cash and short-term deposits	16	**599**	82
Assets classified as held for sale	17	**29**	-
		3,553	1,896
TOTAL ASSETS		**5,952**	4,200
Current liabilities			
Borrowings	19	**(28)**	(24)
Trade and other payables	18	**(1,781)**	(1,092)
Current tax liabilities	14	**(247)**	(6)
Retirement benefit obligations	31	**(1)**	(1)
Provisions for liabilities and charges	22	**(149)**	(134)
Liabilities classified as held for sale	17	**(23)**	-
		(2,229)	(1,257)
Non-current liabilities			
Borrowings	19	**(80)**	(85)
Retirement benefit obligations	31	**(90)**	(120)
Provisions for liabilities and charges	22	**(156)**	(119)
Other non-current liabilities	20	**(81)**	(68)
Deferred tax liabilities	23	**(1)**	-
Deferred income	24	**(2)**	(3)
		(410)	(395)
TOTAL LIABILITIES		**(2,639)**	(1,652)
NET ASSETS		**3,313**	2,548
Equity			
Called-up share capital	25	**388**	388
Share premium account		**17**	17
Other components of equity		**2,907**	2,142
Equity attributable to owners of the Company		**3,312**	2,547
Non-controlling interests		**1**	1
TOTAL EQUITY		**3,313**	2,548

Notes and related statements forming an integral part of these consolidated accounts appear on pages 27 to 59.

Consolidated statement of changes in equity

	Called-up share capital €m	Share premium account €m	Retained earnings €m	Hedging reserve €m	Translation reserves €m	Total €m	Non-controlling interests €m	Total equity €m
Balance as at 1 April 2020	**388**	**17**	**2,247**	**(4)**	**14**	**2,662**	**-**	**2,662**
Loss after taxation	-	-	(140)	-	-	**(140)**	1	**(139)**
Other comprehensive income for the year	-	-	3	24	(2)	**25**	-	**25**
Total comprehensive (loss) for the year	-	-	(137)	24	(2)	**(115)**	1	**(114)**
Balance as at 31 March 2021	**388**	**17**	**2,110**	**20**	**12**	**2,547**	**1**	**2,548**
Profit after taxation	-	-	730	-	-	**730**	-	**730**
Other comprehensive income for the year	-	-	16	15	4	**35**	-	**35**
Total comprehensive income for the year	-	-	746	15	4	**765**	-	**765**
Balance as at 31 March 2022	**388**	**17**	**2,856**	**35**	**16**	**3,312**	**1**	**3,313**

Notes and related statements forming an integral part of these consolidated accounts appear on pages 27 to 59.

Consolidated statement of cash flows

For the financial year ended 31 March

	Note	2022 €m	2021 €m
Operating activities			
Profit/(loss) after taxation		**730**	(139)
Adjustments for:			
Tax	6	**191**	(74)
Profit on disposal of property, plant and equipment	2	**(2)**	(7)
Loss/(profit) on disposal of group companies and classification as held for sale	32	**11**	(1)
Interest income	5	**(4)**	(6)
Interest expense	5	**10**	10
Share of results of joint ventures and associates	10(iii)	**(13)**	(6)
Depreciation and amortisation including impairments (net of grants released)	2	**215**	236
Movement in pension prepayments and provisions		**(9)**	(6)
Movement in insurance and other provisions		**85**	73
Movement in loose plant, tools and spares		**24**	25
Movement in inventories		**(808)**	41
Movement in receivables		**(306)**	48
Movement in payables		**679**	183
Rationalisation costs provided	22	**8**	11
Utilisation of rationalisation provisions	22	**(7)**	(23)
Cash generated from operations		**804**	365
Interest paid		**(1)**	(5)
Interest element of lease rental payments		**(4)**	(5)
Taxation paid		**(10)**	(2)
Net cash flow generated from operating activities		**789**	353
Investing activities			
Purchase of property, plant and equipment	9	**(252)**	(287)
Sale of property, plant and equipment	9	**3**	7
Purchase of other intangible assets	8	**(3)**	(34)
Disposal of subsidiaries and group businesses	32	**1**	1
Deferred proceeds from sale of joint venture	10	**-**	3
Dividends from joint ventures and associates	10	**-**	6
Interest received		**-**	6
Net cash flow used in investing activities		**(251)**	(298)
Financing activities			
New loans to group companies	30	**(4)**	(7)
Proceeds from loans to group companies	30	**-**	11
New loans from group companies		**2**	-
Repayment of loans from group companies		**-**	(3)
Movements in other loans		**(1)**	2
Capital element of lease rental payment	30	**(18)**	(20)
Net cash flow used in financing activities		**(21)**	(17)
Increase in cash and cash equivalents		**517**	38
Cash and cash equivalents at beginning of period		**82**	44
Cash and cash equivalents at end of period		**599**	82
Cash and cash equivalents consist of:			
Cash and short-term deposits	16	**599**	82
		599	82

Notes and related statements forming an integral part of these consolidated accounts appear on pages 27 to 59.

Presentation of consolidated accounts and accounting policies

I Introduction

Tata Steel Nederland BV ('TSN') is based in IJmuiden, in the municipality of Velsen, the Netherlands, and forms part of the Tata Steel Group. Its registration number at the Chamber of Commerce is 34005278. The ultimate parent company is Tata Steel Limited ('TSL'), which is a company incorporated in India with shares listed on the BSE Ltd (formerly the Bombay Stock Exchange Ltd, Mumbai) and the National Stock Exchange of India, and with global depository receipts listed on the London and the Luxembourg Stock Exchanges. The shares of TSN are held by Tata Steel Netherlands Holdings BV ('TSNH').

TSN and its subsidiaries ('the Group') form an international steel group that manufactures, processes and distributes steel products.

The 2022 Annual Accounts of TSN were authorised for issue by the Board of Management on 30 June 2022.

II Basis of preparation

TSN is a private limited company incorporated in the Netherlands. The consolidated financial statements of the Group for the year ended 31 March 2022 comprise the Company and its subsidiaries and the Group's interest in its joint venture and associated undertakings.

The consolidated accounts have been prepared in accordance with International Financial Reporting Standards ('IFRS') as adopted by the European Union ('EU') and interpretations issued by the International Financial Reporting Interpretations Committee ('IFRIC'). The functional and presentational currency of the Company is the Euro.

The financial statements have been prepared under the historical cost convention, unless otherwise stated.

The Group has prepared the financial statements under the IFRS accounting policies set out below and these policies have been applied consistently to all the periods.

Going concern

The Board of Management has assessed the ability of the Group to continue as a going concern. Whereas the financial year 2020/21 was initially severely impacted by the negative effects of the global COVID-19 pandemic on the demand for its steel products, demand rebounded strongly with significant increases in steel selling prices towards the end of the year 2020/21. Throughout the financial year 2021/22, steel market conditions have been very favourable with a corresponding impact on TSN's financial results and allowing TSN to build a significantly positive liquidity position at the beginning of the financial year 2022/23.

The Board of Management has assessed the future funding requirements of the Group in the near term, based on financial forecasts covering 12 months from the date of this report. In conjunction with the positive liquidity position at the beginning of the year 2022/23 and considering expected steel prices, spread levels and volumes, the Group is expecting ongoing positive liquidity for this period, also after factoring in the planned spend for the strategic investments.
In addition, the Group continues to have sufficient access to borrowing facilities, both internal and external, such as the EUR 150 m revolving credit facility which was undrawn at the beginning of financial year 2022/2023. We refer to note 19 for further details on the available facilities.
Furthermore, TSN is currently engaged in constructive discussions regarding long-term financial support from the Netherlands government to assist the Group in meeting the long-term financial challenges of decarbonising TSN's steel production facilities.

Having undertaken this work, the Board of Management is of the opinion that the Group has access to adequate resources to fund its operations for the foreseeable future, and so determine that it is appropriate for the financial statements to be prepared on a going concern basis.

III New standards and interpretations applied

The following new International Accounting Standards ('IAS') and new IFRSs have been adopted in the current year:

		Effective Date*
IFRS 4 (Amendments)	Amendments to IFRS 4 Insurance contracts – deferral of IFRS 9	1 Jan 2021
IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 (Amendments)	Interest Rate Benchmark Reform—Phase 2	1 Jan 2021

** periods commencing on or after*

TSN has adopted the above amendments and in accordance with the transition provisions, the amendments have been adopted retrospectively to financial instruments. Comparative amounts have not been restated, and there was no impact on the current opening reserves amount on adoption. Neither of these amendments had a material impact on the TSN financial statements.

'Phase 2' of the Interest Rate Benchmark Reform amendments requires that, for financial instruments measured using amortised cost measurement (that is, financial instruments classified as amortised cost and debt financial assets classified as FVOCI), changes to the basis for determining the contractual cash flows required by interest rate benchmark reform are reflected by adjusting their effective interest rate. No immediate gain or loss is recognised.

Where some or all changes in the basis for determining the contractual cash flows of a financial asset and liability does not meet the above criteria, the above practical expedient is first applied to the changes required by interest rate benchmark reform, including updating the instrument's effective interest rate. Any additional changes are accounted for in the normal way (that is, assessed for modification or derecognition, with the resulting modification gain / loss recognised immediately in profit or loss where the instrument is not derecognised).

For the year ended 31 March 2022, TSN has not been required to apply the practical expedients provided under 'phase 2' to any of its long-term debt.

SONIA (Sterling Overnight Index Average) replaced GBP LIBOR from 1 January 2022. At 31 March 2022 there were no contracts that required transition from LIBOR to SONIA as TSN currently does not have any contracts which reference GBP LIBOR and there is no significant exposure to other interest rate benchmarks proposed to be amended or replaced as part of the IBOR reforms.

IV New standards and interpretations not applied

The International Accounting Standards Board ('IASB') has issued the following Standards, which are relevant to the Group's reporting but have either not been applied as they have not been adopted for use in the EU in the year ended 31 March 2022, or have an effective date after the date of these financial statements:

		Effective Date*
IFRS 17	Insurance Contracts	1 Jan 2023
IAS 12 (Amendments)	Deferred Tax related to Assets and Liabilities arising from a Single Transaction	1 Jan 2023
IAS 1 (Amendments)	Disclosure of Accounting Policies	1 Jan 2023
IAS 1 (Amendments)	Classification of Liabilities as Current or Non-current	1 Jan 2023
IAS 8 (Amendments)	Definition of Accounting Estimates	1 Jan 2023
IAS 37 (Amendments)	Onerous Contracts—Cost of Fulfilling a Contract	1 Jan 2022
IAS 16 (Amendments)	Proceeds before Intended Use	1 Jan 2022
IFRS 3 (Amendments)	Reference to the Conceptual Framework	1 Jan 2022
IFRS 1, IFRS 9 Illustrative Example 13 of IFRS 16 and IAS 41 (Amendments)	Annual Improvements to IFRS Standards 2018–2020	1 Jan 2022**

** periods commencing on or after*
*** except for the amendment to IFRS 16 for which no effective date is stated as it regards only an illustrative example*

Management have performed a review of the expected impact from other standards and interpretations not applied as shown above. Management do not expect a material impact as a result these new standards and interpretations not yet applied.

V Use of estimates and critical accounting judgements

In the application of the Group's accounting policies, which are described in section VI, the BoM are required to make judgements (other than those involving estimations) that have a significant impact on the amounts recognised and to make estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of revision and future periods if the revision affects both current and future periods.

Critical judgements in applying the Group's accounting policies

The critical judgements, apart from those involving estimations (which are presented separately below), that the BoM has made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in the financial statements are presented below.

Definition of cash generating units ('CGU')

A significant part of the Group's capital is invested in property, plant and equipment and intangible assets (including goodwill). Determining whether these assets are impaired requires an estimation of value in use of the CGU to which the asset relates. A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. For the Group these are usually taken to be individual hubs/businesses or legal entities, although these are combined or split into base entities, where deemed appropriate to reflect the specific economic risks or operational inter-dependence of particular locations and operations based on the governance structure and lines of reporting. This process of defining CGUs requires the exercise of significant judgement.

Following the formal separation of TSE into a UK and MLE value chain on 1 October 2021, the definition of some specific CGUs in TSN used for the impairment testing of PPE and goodwill at 31 March 2022 has been updated. There is a significant change in the governance structure of the TSN Group with the formation of a separate MLE executive and leadership team as well as associated changes to reporting and processes. Under IAS 36 cash generating units should be identified consistently from period to period for the same asset or types of assets, unless a change is justified.

From 1 October 2021, there is a change in the definition of the previous Strip MLE and Packaging NL CGU's.
Until separation, Packaging NL was part of the cross-border separate Packaging Business within TSE that had its own management and P&L accountability. After separation, the Packaging NL activities were merged with the former Strip MLE activities into the Business Unit Ijmuiden. There is no longer an integral separate management for the Packaging activities nor separate

result reporting. For all intents and purposes, Packaging and Strip MLE are therefore considered to be one CGU.

All other CGUs remain unchanged from previous periods.

Key sources of estimation uncertainty

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting period end that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities are discussed below.

1) Provisions
Estimates in calculating provisions for environmental remediation, legal claims and employee benefits are based on previous experience and third party advice and are reassessed on a regular basis. Judgement is required in assessing the likely costs and the timing of these costs. Further details on the Group's provisions can be found in note 22.

2) Recognition of deferred tax assets
The recognition of deferred tax assets is subject to estimations of the future available taxable profits that the directors consider to be more likely than not to occur based on the Group's annual plans and future forecasts. Further information can be found in note 23.

3) Post-retirement benefits
The Group's retirement benefit obligations are assessed by selecting key assumptions. The selection of inflation, salary growth, and mortality rates are key sources of estimation uncertainty which could lead to a material adjustment in the defined benefit obligations within the next financial year. The Group sets these judgements with close reference to market conditions and third party actuarial advice.

The Group's defined benefit obligations are discounted at a rate set by reference to market yields at the end of the reporting period on high quality corporate bonds. The most significant criteria considered for the selection of bonds include the issue size of the corporate bonds, quality of the bonds and the identification of outliers which are excluded.

4) Impairment of non-current assets
Value in use calculations require an estimation of future cash flows expected to arise from the CGU and a suitable discount rate in order to calculate present value. The present value is sensitive to changes in the discount rate used in the value in use models, the forecast profitability of the Group in the third year of the Group's Annual Plan, and the expected impact of decarbonisation on the Group. Further details on the Group's impairment review, key assumptions, and sensitivity analyses are set out in note 9. In respect of impairment of investments in the Company accounts, judgement is required around the relevant enterprise value of the TSN Group.

The detailed accounting policies for each of these areas, are outlined in section VI below.

VI Critical accounting policies

(a) Property, plant and equipment
Property, plant and equipment are recorded at original cost less accumulated depreciation and any recognised impairment loss, with the exception of land. Cost includes professional fees and, for assets constructed by the Group, any related works to the extent that these are directly attributable to the acquisition or construction of the asset. This includes borrowing costs capitalised in respect of qualifying assets in accordance with the Group's policy. Amounts incurred in connection with capital projects that are not directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended (which the Group refers to as 'commissioning costs' and which include expenses such as initial operating losses incurred while technical deficiencies on new plant are rectified and incremental operating costs that are incurred while the new plant is operating at less than full capacity) are written off to profit and loss as incurred. Assets in the course of construction are depreciated from the date on which they are ready for their intended use.

The gain or loss arising on disposal of an asset is determined as the difference between the sale proceeds and the carrying amount of the asset, and is recognised in profit and loss.

Included in property, plant and equipment are loose plant and tools which are stated at cost less amounts written off related to their expected useful lives and estimated scrap value and also spares, against which impairment provisions are made where necessary to cover slow moving and obsolete items.

Subsequent costs are included in the carrying value of an asset when it is probable that additional future economic benefits will flow to the Group and the cost of the item can be measured reliably. All other repairs and renewals are charged to profit and loss as incurred.

(b) Depreciation, amortisation and impairment of property, plant and equipment and other intangible assets (including goodwill)
Depreciation or amortisation is provided so as to write off, on a straight-line basis, the cost of property, plant and equipment and other intangible assets, including right-of-use assets, to their residual value. These charges are commenced from the dates the assets are available for their intended use and are spread over their estimated useful economic lives or, in the case of leased assets, over the lease period if shorter. The estimated useful lives of assets and residual values are reviewed regularly and, when necessary, revised. Accelerated depreciation or amortisation is provided where an asset is expected to become obsolete before the end of its normal useful life or if events or changes in circumstances indicate that an impairment loss needs to be recognised, as discussed below. No further charges are provided in respect of assets that are fully written down but are still in use.

The estimated useful lives for the main categories of property, plant and equipment and other intangible assets are:

		Life Years
Freehold and long leasehold buildings that house plant and other works buildings		25
Other freehold and long leasehold buildings		50
Plant and machinery:		
Iron and steelmaking	(maximum)	25
IT hardware and software	(maximum)	8
Office equipment and furniture		10
Motor vehicles		4
Other	(maximum)	15
Patents and trademarks		4
Product and process development costs		5

At each reporting period end, the Group reviews the carrying amounts of its property, plant and equipment and other intangible assets to determine whether there is any indication that the carrying amount of those assets may not be recoverable through continuing use.

If any such indication exists, the recoverable amount of the asset is reviewed in order to determine the extent of the impairment loss (if any). Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the CGU to which the asset belongs. Other intangible assets (including goodwill) with indefinite useful lives are tested for impairment annually and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use and fair value less cost to sell, the estimated future cash flows are discounted to their present value using a pre-tax discount rate for value in use and a post-tax discount rate for fair value less costs to sell, based upon the Group’s long term weighted average cost of capital (‘WACC’), which also recognises the comparative WACCs of its European peers, with appropriate adjustments for the risks associated with the relevant units. If the recoverable amount of an asset (or CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or CGU) is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or CGU) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or CGU) in prior years. A reversal of an impairment loss is recognised as income immediately, although impairments of goodwill are not subject to subsequent reversal.

(c) Taxation

The tax expense represents current tax and deferred tax.

Current tax is based on taxable profit for the year. Taxable profit differs from net profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and is accounted for using the balance sheet liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences. In contrast, deferred tax assets are only recognised to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilised. Liabilities are not recognised for taxable temporary differences arising on investments in subsidiaries, joint ventures and associates where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Both current and deferred tax items are calculated using the tax rates that are expected to apply in the period when the liability is settled or the asset is realised. This means using tax rates that have been enacted or substantially enacted by the end of the reporting period. Deferred tax is charged or credited in the income statement, except when it relates to items charged or credited directly to equity, in which case the deferred tax is also dealt with in equity.

Deferred tax assets and liabilities are offset to the extent that they relate to taxes levied by the same tax authority and they are in the same taxable entity, or a group of taxable entities where the tax losses of one entity are used to offset the taxable profits of another and there are legally enforceable rights to set off current tax assets and current tax liabilities within that jurisdiction.

(d) Retirement benefit costs

The group operates a number of defined benefit and a number of defined contribution pension plans for its employees. Payments to defined contribution retirement benefit schemes are charged as an expense as they fall due.

For defined benefit retirement schemes the cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at each reporting period end. The Group applies IAS 19 ‘Employee Benefits’ to recognise all actuarial gains and losses directly within retained earnings, presenting those arising in any one reporting period as part of the relevant statement of comprehensive income. In applying IAS 19, in relation to retirement benefits costs, the current service cost and net interest cost have been treated as a net expense within employment costs.

Past service cost is recognised immediately to the extent that the benefits are already vested, and otherwise is amortised on a straight-line basis over the average period until the benefits become vested.

The retirement benefit liability recognised in the balance sheet represents the fair value of scheme assets less the present value of the defined benefit obligation as adjusted for unrecognised past service cost. Any asset resulting from this calculation is limited to unrecognised past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

(e) Provisions
Provisions for rationalisation and related measures, environmental remediation and legal claims are recognised when the Group has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation, and the amount can be reliably estimated. This involves a series of management judgements and estimates that are based on past experience of similar events and third party advice where applicable. Where appropriate and relevant those provisions are discounted to take into consideration the time value of money.

In particular, redundancy provisions are made where the plans are sufficiently detailed and well advanced, and where appropriate communication to those affected has been made at the end of the reporting period. These provisions also include charges for any termination costs arising from enhancement of retirement or other post-employment benefits for those employees affected by these plans.

Provisions are also created for long term employee benefits that depend on the length of service, such as long service and sabbatical awards, disability benefits and long term compensated absences such as sick leave. The amount recognised as a liability is the present value of benefit obligations at the end of the reporting period, and all movements in the provision (including actuarial gains and losses or past service costs) are recognised immediately within profit and loss.

TSN participates in the EU Emissions Trading Scheme, initially measuring any rights received or purchased at cost, and recognises a liability in relation to carbon dioxide allowances if there is any anticipated shortfall in the level of allowances received or purchased when compared with actual emissions in a given period. Any surplus is only recognised once it is realised in the form of an external sale.

VII Other accounting policies

(a) Basis of consolidation
The consolidated income statement, statement of comprehensive income, balance sheet, statement of changes in equity and statement of cash flows include the Company and its subsidiaries. They also include the Group's share of the profits, net assets and retained post acquisition reserves of joint ventures and associates that are consolidated using the equity method of consolidation.

The profits or losses of subsidiaries, joint ventures and associates acquired or sold during the period are included from the date of acquisition or up to the date of their disposal. All intra-group transactions, balances, income and expenses are eliminated on consolidation, including unrealised profits on such transactions.

(b) Business combinations
On the acquisition of a subsidiary, joint venture or associate, fair values are attributed to the net assets acquired. Any excess of the fair value of consideration given (including the fair value of any contingent consideration) over the fair values of the Group's share of the identifiable net assets acquired is treated as goodwill. The costs of acquisition are charged to profit and loss in the period in which they are incurred. If the fair value of the net assets acquired exceeds the fair value of consideration then these fair values are reassessed before taking the remainder as a credit to profit and loss in the period of acquisition.

Goodwill is recognised as an asset. Although it is not amortised, it is reviewed for impairment annually and whenever there is a possible indicator. Any impairment is recognised immediately in profit and loss and cannot subsequently be reversed. On disposal of a subsidiary, joint venture or associate any residual amount of goodwill is included in the determination of the profit or loss on disposal.

Where an acquisition is achieved in stages, upon obtaining control the previously held equity interest is reassessed at fair value and any resulting gain or loss is recognised in profit and loss.

(c) Revenue
The Group's revenue is primarily derived from the single performance obligation to transfer steel products under arrangements in which the transfer of control of the products and the fulfilment of the Group's performance obligation occur at the same time. Revenue from the sale of goods is recognised when the Group has transferred control of the goods to the buyer and the buyer obtains the benefits from the goods, the potential cash flows and the amount of revenue (the transaction price) can be measured reliably, and it is probable that the Group will collect the consideration to which it is entitled to in exchange for the goods.

The group manufactures and sells a range of steel products. Sales are recognised when control of the products has transferred, being when the products are delivered to the customer. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred, and either the customer has accepted the products in accordance with the sales contract, or the group has objective evidence that all criteria for acceptance have been satisfied.

The steel is often sold with volume discounts based on aggregate sales over a 12 month period. Revenue from these sales is recognised based on the price specified in the contract, net of the estimated volume discounts.

Accumulated experience is used to estimate and provide for the discounts, using the expected value method, and revenue is only recognised to the extent that it is highly probable that a significant reversal will not occur. A contract liability is recognised for expected volume discounts payable to customers in relation to sales made until the end of the reporting period. No element of financing is deemed present as the sales are made with a credit term of 60 days, which is consistent with market practice. Any obligation to provide a refund is recognised as a provision.

A receivable is recognised when the goods are delivered as this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due.

The group does not have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the group does not adjust any of the transaction prices for the time value of money.

(d) Government grants

Grants related to expenditure on property, plant and equipment are credited to profit and loss over the useful lives of qualifying assets. Grants related to revenue are credited to the income statement in line with the timing of when costs associated with the grants are incurred. Total grants received less the amounts credited to profit and loss at the end of the reporting period are included in the balance sheet as deferred income.

(e) Insurance

Most of TSN's insurances are arranged by Tata Steel Europe ('TSE'). Insurance premiums in respect of those insurances placed by TSE on behalf of TSN and those arranged directly by TSN with insurers are charged to the income statement in the period to which they relate.

(f) Financing items

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

Interest expense, excluding that related to financing the construction of qualifying property, plant and equipment is expensed as incurred. Dividend income is recognised when the right to receive payment is established.

(g) Foreign currencies

Monetary assets and liabilities in foreign currencies are translated into euros at the quoted rates of exchange ruling at the end of each reporting period. Income statement items and cash flows are translated into euros at the average rates for the financial period. In order to hedge its exposure to certain foreign exchange transaction risks, the Group enters into forward contracts and options (see (h) below for details of the Group's accounting policies in respect of such derivative financial instruments). In preparing the financial statements of the individual companies, transactions in currencies other than the entity's functional currency are recognised at the rates of exchange prevailing on the dates of the transactions.

Exchange differences on the retranslation of the opening net investment in foreign enterprises and the retranslation of profit and loss items from average to closing rate are recorded as movements on reserves. Such cumulative exchange differences are transferred to profit and loss on subsequent disposals of the foreign enterprise and for other substantial reductions in capital in these enterprises during the period.

Under IAS 21, cumulative translation differences on the consolidation of subsidiaries are only being accumulated for each individual subsidiary from the date of acquisition.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

(h) Financial instruments

Financial assets and financial liabilities are recognised on the Group's balance sheet when the Group becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. The detailed accounting treatment for such items can differ, as described in the following sections:

(i) Financial assets

All regular way purchases or sales of financial assets are recognised and derecognised on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

All recognised financial assets are measured subsequently in their entirety at either amortised cost or fair value, depending on the classification of the financial assets. Where the Group transfers substantially all the risks and rewards of ownership of a financial asset, the financial asset is derecognised and any rights and obligations created or retained in the transfer are recognised separately as assets or liabilities. This includes the Group's €200m non-recourse debtor securitisation facility.

Classification of financial assets

Debt instruments that meet the following conditions are measured subsequently at amortised cost:

- the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Debt instruments that meet the following conditions are measured subsequently at fair value through other comprehensive income ('FVTOCI'):

- the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling the financial assets; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

By default, all other financial assets are measured subsequently at fair value through profit or loss ('FVTPL').

Where the group purchases emission rights from an emission trading scheme, it recognises these as an asset, and values the asset at cost. No amortisation is recognised, provided that the group intends to utilise the asset to settle emission rights liabilities.

(ii) Impairment of financial assets

The Group recognises a loss allowance for Expected Credit Losses ('ECL') on investments in debt instruments that are measured at amortised cost or at FVTOCI, lease receivables, trade receivables and contract assets. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

The Group always recognises lifetime ECL for trade receivables, contract assets and lease receivables.

For all other financial instruments and in the case of the company intercompany receivables, the Group recognises lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12 months of ECL.

The measurement of expected credit losses is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information.

Even when credit losses are recognised, amounts are only fully written off once all possibility of recoverability has been extinguished.

(iii) Financial liabilities
All financial liabilities are measured subsequently at amortised cost using the effective interest method or at FVTPL.

Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVTPL.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognised in profit or loss to the extent that they are not part of a designated hedging relationship (see Hedge accounting policy). The net gain or loss recognised in profit or loss incorporates any interest paid on the financial liability and is included in profit or loss.

Financial liabilities that are not (i) contingent consideration of an acquirer in a business combination, (ii) held-for-trading, or (iii) designated as at FVTPL, are measured subsequently at amortised cost using the effective interest method.

(iv) Derivative financial instruments and hedge accounting
In the ordinary course of business the Group uses certain derivative financial instruments to reduce business risks which arise from its exposure to foreign exchange, base metal prices and interest rate fluctuations. The instruments are confined principally to forward foreign exchange contracts, forward rate agreements, interest rate swaps and London Metal Exchange ('LME') contracts. The instruments are employed as economic hedges of transactions included in the accounts or forecast for firm contractual commitments. Contracts do not generally extend beyond 6 months, except for certain interest rate swaps and commodity contracts.

Derivatives are initially accounted for and measured at fair value from the date the derivative contract is taken out. Following this, at each subsequent reporting period end the derivative is re-measured at its current fair value. For forward currency contracts, interest rate swaps and commodity contracts the fair values are determined based on market forward rates at the end of the reporting period. The Group seeks to adopt hedge accounting for these currency, interest rate and commodity contracts. At inception of the hedge relationship, the group documents the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items. This documentation includes, inter alia, items such as identification of the hedged item or transaction and the nature of the risk being hedged. At inception each hedge is expected to be highly effective in achieving an offset of changes in fair value or cash flows attributable to the hedged risk. The methodology of testing the effectiveness and the reliability of this approach for testing is also considered and documented at inception. This effectiveness is assessed on an ongoing basis throughout the life cycle of the hedging relationship. In particular, only forecast transactions that are highly probable are subject to cash flow hedges. Changes in the fair value of derivative financial instruments that are designated and effective as hedges of future cash flows are recognised directly in equity and the ineffective portion is recognised immediately in profit and loss. If the cash flow hedge of a firm commitment or forecasted transaction results in the recognition of a non-financial asset or liability, then, at the time the asset or liability is recognised, the associated gains or losses on the derivative that had previously been recognised in equity are included in the initial measurement of the asset or liability. For hedges that do not result in the recognition of a non-financial asset or a liability, amounts deferred in equity are recognised in profit and loss in the same period in which the hedged item affects profit and loss.

For an effective hedge of an exposure to changes in fair value, the hedged item is adjusted for changes attributable to the risk being hedged with the corresponding entry in profit and loss. Gains or losses from re-measuring the associated derivative are also recognised in profit and loss.

Changes in the fair value of derivative financial instruments that do not qualify for hedge accounting are recognised in profit and loss as they arise.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, exercised or no longer qualifies for hedge accounting. At that time, any cumulative gain or loss on the hedging instrument recognised in equity is retained in equity until the forecasted transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in equity is reclassified to net profit or loss for the period.

(i) Other intangible assets
Patents, trademarks and software are included in the balance sheet as intangible assets where they are clearly linked to long term economic benefits for the Group. In this case they are measured initially at fair value on acquisition or purchase cost and then amortised on a straight-line basis over their estimated useful lives. All other costs on patents, trademarks and software are expensed in profit and loss as incurred.

Expenditure on research activities is recognised as an expense in the period in which it is incurred. Costs incurred on individual development projects are recognised as intangible assets from the date that all of the following conditions are met:

(i) completion of the development is technically feasible;
(ii) it is the intention to complete the intangible asset and use or sell it;
(iii) it is clear that the intangible asset will generate probable future economic benefits;
(iv) adequate technical, financial and other resources to complete the development and to use or sell the intangible asset are available; and

(v) it is possible to reliably measure the expenditure attributable to the intangible asset during its development.

Costs are no longer recognised as an asset when the project is complete and available for its intended use, or if these criteria no longer apply. The approach to amortisation and impairment of other intangible assets is described in section VI (b) above.

Where development activities do not meet the conditions for recognition as an asset, any associated expenditure is treated as an expense in the period in which it is incurred.

(j) Leases

As a lessee, the Group assesses if a contract is or contains a lease at the inception of the contract. 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.

The Group recognises a right-of-use asset and a lease liability at the commencement date, except for short-term leases of twelve months or less, leases for which the underlying asset is low value and leases of intangible assets, which are expensed in the consolidated income statement on a straight-line basis over the lease term.

The lease liability is initially measured at the present value of the lease payments that are not paid at that date, discounted using the interest rate implicit in the lease, if that rate can be readily determined. If that rate cannot be readily determined, the Group uses the incremental borrowing rate. The incremental borrowing rate is calculated with reference to the businesses cost of funding, length of the lease and the suitability of the assets to leasing.

Lease payments can include fixed payments, variable payments that depend on an index or rate known at the commencement date and extension options, if the Group is reasonable certain to exercise the option. Lease liabilities are classified as part of borrowings.

The associated right-of-use asset is capitalised equal to the lease liability and disclosed together with property, plant and equipment. The right-of-use asset is subsequently depreciated on a straight-line basis over the lease term. Right-of-use assets are also subject to testing for impairment if there is an indicator for impairment.

Variable lease payments not included in the measurement of the lease liabilities are expensed in the consolidated income statement in the period in which the events or conditions which trigger those payments occur.

(k) Joint ventures, joint operations and associates

The results and assets and liabilities of joint ventures and associates are incorporated in the accounts using the equity method of accounting, except where classified as held for sale (see section (l) below).

Investments in joint ventures and associates are initially measured at cost. Any excess of the cost of acquisition over the Group's share of the fair values of the identifiable net assets acquired, being goodwill, is included within the carrying value of the joint venture or associate and is subsequently tested for impairment on an annual basis.

Any deficiency of the cost of acquisition below the Group's share of the fair values of the identifiable net assets acquired is credited to profit or loss in the period of acquisition. The Group's share of post-acquisition profits and losses is recognised in profit and loss, and its share of post-acquisition movement in reserves are recognised directly in reserves. Losses of associates in excess of the Group's interest in those associates are not recognised, unless the Group has incurred obligations or made payments on behalf of the associate.

Unrealised gains on transactions with joint ventures or associates are eliminated to the extent of the Group's interest in those entities and, where material, the results of joint ventures and associates are modified to conform to the Group's policies.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets and obligations for the liabilities relating to the arrangement. Joint operations are accounted for by recognising the share of assets, liabilities, expenses and income relating to the joint operation.

(l) Non-current assets and disposal groups held for sale

Non-current assets and disposal groups classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell, when the sale is highly probable.

Non-current assets classified as held for sale and the assets of a disposal group classified as held for sale are presented separately from the other assets in the balance sheet. The liabilities of a disposal group classified as held for sale are presented separately from other liabilities in the balance sheet.

Non-current) assets held for sale (including those that are part of a disposal group) are not depreciated or amortised while they are classified as held for sale. An impairment loss is recognised for any initial or subsequent write-down of a disposal group to fair value less costs to sell.

(m) Inventories

Inventories of raw materials are valued at the lower of cost and net realisable value. Cost is generally determined using the weighted average cost method. Inventories of partly processed materials, finished products and stores are individually valued at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Net realisable value is the price at which the inventories can be realised in the normal course of business after allowing for the cost of conversion from their existing state to a finished condition and for the cost of marketing, selling and distribution. Provisions are made to cover slow moving and obsolete items based on historical experience of utilisation on a product category basis, which involves individual businesses considering their local product lines and market conditions.

(n) Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks, other short term highly liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are shown within borrowings in current liabilities on the balance sheet.

(o) Equity

Share capital: Ordinary shares are classified as equity.

Dividend distribution to the Company's shareholders is recognised as a liability in the Company's annual accounts in the period in which the dividends are approved by the Company's shareholders. Where dividends are paid in kind the asset transferred is measured at fair value and any difference between the fair value and the carrying value of the asset is recognised in the income statement.

(p) Cash flow statement

The Cash flow statement has been prepared using the indirect method. Cash flows in foreign currencies have been translated into euros using average exchange rates, approximating the foreign exchange rate at transaction date. Exchange rate differences on cash items are shown separately in the Cash flow statement.

Receipts and payments with respect to income tax and interest are included in the Cash flows from operating activities. The cost of acquisition of subsidiaries, associates and joint ventures, and other investments, insofar as it was paid for in cash, is included in Cash flows from investing activities. Acquisitions or divestments of subsidiaries are presented net of cash balances acquired or disposed of, respectively. Cash flows from derivatives are recognized in the Cash flow statement in the same category as those of the hedged item.

Notes to the consolidated accounts

1. Revenue

The Group derives its revenue from contracts with customers for the transfer of goods and services over time and at a point in time in the following major geographic regions. Substantially all revenue is derived from the sale of goods.

	2022 €m	2021 €m
Revenue by destination:		
The Netherlands	**1,151**	657
Europe excluding the Netherlands	**4,519**	2,820
North America	**855**	518
Rest of the world	**379**	352
	6,904	4,347

2. Operating costs

	2022 €m	2021 €m
Costs by type:		
Raw materials and consumables	**3,333**	2,153
Maintenance costs (excluding own labour)	**443**	348
Other external charges (including fuels and utilities, hire charges and carriage costs)	**739**	503
Employment costs (Note 4)	**1,170**	1,008
Depreciation, amortisation and impairments (Note 8 and 9)	**215**	236
Regional development and other grants released (Note 24)	**(1)**	(1)
Other operating items (including rents, rates, insurance and general expenses)	**510**	350
Changes in inventory of finished goods and work in progress	**(390)**	9
Own work capitalised	**(38)**	(36)
Profit on disposal of property, plant and equipment	**(2)**	(7)
Profit on disposal of group companies (Note 32)	**-**	(1)
Loss on impairment of asset held for sale (Note 17)	**11**	-
	5,990	4,562

The above costs include €13m (2021: €27m) in respect of restructuring and impairment which relate to Employment costs €8m (2021: €11m), Depreciation and amortisation €5m (2021: €15m) and Other operating items €nil (2021: €1m). Further analysis of restructuring and impairment costs is presented in Note 3.

	2022 €m	2021 €m
The above costs are stated after including:		
Amortisation of other intangible fixed assets (Note 8)	**6**	10
Impairment losses related to property, plant and equipment (Note 3)	**5**	15
Depreciation of owned assets (Note 9)	**189**	192
Depreciation of leased assets (Note 9)	**15**	19
Low value lease costs	**1**	1
Variable lease costs	**19**	17
Costs of research and development (gross)	**62**	54
Recoveries on research and development	**(4)**	(3)
Impairments against trade receivables (Note 15(ii))	**2**	1
Net exchange rate results	**(1)**	7
Emission rights costs	**78**	59

3. Restructuring and impairment costs

	2022 €m	2021 €m
Provision for restructuring and related measures:		
Redundancy and related costs (Note 4)	**8**	11
Impairment losses related to property, plant and equipment (Note 9)	**5**	15
Other rationalisation costs	**-**	1
	13	27

4. Employees

	2022 €m	2021 €m
The total employment costs of all employees (including directors) in the Group were:		
Wages and salaries	**940**	773
Social security costs	**119**	120
Pension costs (Note 31)	**103**	104
Redundancy and related costs (Note 3 and 22)	**8**	11
	1,170	1,008

The average number of the Group's employees during the year was 11,355 (2021: 11,370). The analysis by business area and by country was:

	2022	2021		2022	2021
BU IJmuiden	**8,990**	8,944	The Netherlands	**9,432**	9,413
BU Downstream	**2,365**	2,426	France	**711**	718
			Germany	**592**	602
			Other	**620**	637

Other pension costs can be further analysed as follows:

	2022 €m	2021 €m
Defined benefit schemes (Note 31)	**3**	4
Defined contribution schemes (Note 31)	**100**	100
	103	104

5. Financing items

	2022 €m	2021 €m
Interest expense:		
Bank and other borrowings	**(4)**	(4)
Leases	**(4)**	(5)
Discount on disposal of trade receivables within purchase agreement with external companies	**(2)**	(1)
Finance costs	**(10)**	(10)
Interest income:		
From Group companies	**2**	6
From banks	**2**	-
Finance income	**4**	6
	(6)	(4)

6. Taxation

	2022 €m	2021 €m
Dutch corporation tax	**227**	(44)
Dutch prior year corporation tax	**-**	(5)
Other corporation tax	**18**	-
Other prior year corporation tax	**3**	(4)
Current tax	**248**	(53)
Dutch deferred tax	**(28)**	(20)
Other deferred tax	**(29)**	(1)
Taxation	**191**	(74)

In addition to the total taxation charged/(credited) to the income statement, an amount of €12m has been charged in other comprehensive income in the year (2021: a charge of €7m).

The total charge/(credit) for the year can be reconciled to the accounting profit/(loss) as follows:

	2022 €m	2021 €m
Profit/(loss) before taxation	**921**	(213)
Profit/(loss) before taxation multiplied by the Applicable corporation tax rate of 25.31% (2021: 25.11%)	**233**	(53)
Effects of:		
Adjustments to current tax in respect of prior periods	**3**	(9)
Adjustments to deferred tax in respect of prior periods	**(4)**	-
Change in tax rates(i)	**(3)**	(6)
Changes in unrecognised losses and other tax benefits	**(38)**	-
Other differences	**-**	(6)
Total taxation	**191**	(74)

(i) €3m credit in current year relates to the deferred tax impact of the increase in the future Dutch corporate income tax rate from 25.0% to 25.8% effective from 1 January 2022.

The applicable corporation tax rate of 25.31% for 2021-22 is the average tax rate weighted in proportion to the accounting (losses)/profits earned in each geographical area.

7. Goodwill

	2022 €m	2021 €m
Net book value	**8**	8

Goodwill acquired in a business combination is allocated, at acquisition, to the cash generating units that are expected to benefit from that combination.

The outcome of the Group's goodwill impairment test as at 31 March 2022 resulted in no impairment (2021: no impairment).

8. Other intangible assets

2022	Computer software €m	Development costs €m	Patents and trademarks €m	Emission Rights €m	**Total €m**
Cost at beginning of period	141	39	1	28	**209**
Additions	3	-	-	-	**3**
Utilisation	-	-	-	(28)	**(28)**
Reclassification	6	-	-	-	**6**
Cost at end of period	150	39	1	-	**190**
Amortisation at beginning of period	64	39	1	-	**104**
Charge for the period	6	-	-	-	**6**
Reclassification	6	-	-	-	**6**
Amortisation at end of the period	76	39	1	-	**116**
Net book value at end of the period	74	-	-	-	**74**

2021	Computer software €m	Development costs €m	Patents and trademarks €m	Emission Rights €m	**Total €m**
Cost at beginning of period	135	39	1	5	**180**
Additions	6	-	-	28	**34**
Utilisation	-	-	-	(5)	**(5)**
Cost at end of period	141	39	1	28	**209**
Amortisation at beginning of period	55	38	1	-	**94**
Charge for the period	9	1	-	-	**10**
Amortisation at end of the period	64	39	1	-	**104**
Net book value at end of the period	77	-	-	28	**105**

9. Property, plant and equipment

2022	Land and buildings €m	Plant and machinery €m	Assets under construction €m	**Total €m**
Cost or valuation at the beginning of period	1,192	7,121	648	**8,961**
Additions	3	88	209	**300**
Exchange rate movements	3	11	-	**14**
Reclassifications	1	(7)	2	**(4)**
Transfers to/(from) assets under construction	47	214	(261)	**-**
Transfers to held for sale	(7)	(36)	(2)	**(45)**
Disposals	(27)	(136)	-	**(163)**
Cost or valuation at end of period	1,212	7,255	596	**9,063**
Depreciation at the beginning of period	936	5,958	2	**6,896**
Charge for the period	22	182	-	**204**
Impairment charge for the period	-	4	1	**5**
Exchange rate movements	3	10	2	**15**
Reclassifications	-	(4)	-	**(4)**
Transfers to held for sale	(7)	(36)	-	**(43)**
Disposals	(24)	(115)	(1)	**(140)**
Depreciation at end of period	930	5,999	4	**6,933**
Net book value at end of period	282	1,256	592	**2,130**

2021	Land and buildings €m	Plant and machinery €m	Assets under construction €m	**Total €m**
Cost or valuation at the beginning of period	1,175	7,057	589	**8,821**
Additions	1	80	197	**278**
Exchange rate movements	(3)	(10)	-	**(13)**
Transfers to/(from) assets under construction	21	117	(138)	**-**
Disposals	(2)	(123)	-	**(125)**
Cost or valuation at end of period	1,192	7,121	648	**8,961**
Depreciation at the beginning of period	919	5,862	2	**6,783**
Charge for the period	21	190	-	**211**
Impairment charge for the period	3	12	-	**15**
Exchange rate movements	(3)	(10)	-	**(13)**
Disposals	(4)	(96)	-	**(100)**
Depreciation at end of period	936	5,958	2	**6,896**
Net book value at end of period	256	1,163	646	**2,065**

The additions to the right-of-use assets during the 2022 financial period were €17m (2021: €8m).

Consistent with the annual test for impairment of goodwill as at 31 March 2022 (see note 7) property, plant and equipment was also tested for impairment at that date where indicators of impairment existed. This involves the Group estimating the recoverable amounts of individual Cash Generating Units (CGU). During the year the definition of the Groups largest CGU has changed whereby Strip Products MLE and Packaging IJmuiden have now been combined to form Business Unit IJmuiden. See Critical Judgements in Applying the Group's Accounting Policies on page 28.

Decarbonisation is central to the long-term strategy of TSN which has set out its ambitions to substantially reduce carbon emissions and become carbon neutral by 2050. During the year TSN announced that it aims to pursue the DRI route for making iron using natural gas or hydrogen and is currently exploring the options for implementing this and how such investments could be financed. Irrespective of the choice of technology, TSN's MLE business still aims to be producing a combined c. 7mt of steel post decarbonisation, is not currently envisioning any changes to their downstream steel making capability, and aims to continue to serve the same markets by offering its customers the low carbon steel products they require.

Against this background and consistent with previous years, a value in use (VIU) calculation has been prepared to consider the recoverable amount of the Group's most material CGU (Business Unit IJmuiden). The calculation uses cash flow forecasts based on the most recently approved financial budgets and strategic forecasts which cover a period of three years and future projections taking the analysis out to perpetuity based on a steady state, sustainable cash flow reflecting average steel industry conditions between successive peaks and troughs of profitability. Key assumptions for the value in use calculation are those regarding expected changes to selling prices and raw material costs, EU steel demand, exchange rates, the direct and indirect effect of carbon taxes, and a pre-tax discount rate of 8.4% (2021: 8.1%). Changes in selling prices, raw material costs, exchange rates and EU steel demand are based on expectations of future changes in the steel market based on external market sources.

In preparing the value in use calculation TSN has considered the effect that climate related risks may have on its future cash flow generation. Included within the cash flow forecasts are estimates for costs of compliance under the EU Emissions Trading Scheme based on the Group's estimated shortfall between free allowances under the scheme and actual emissions. The forecasts also consider the ability of the Group to mitigate these costs, primarily through the successful introduction of a CO2 surcharge which has reduced uncertainty in regards to fluctuation in CO2 costs on the profitability of the Group over the 3 year plan period.

The BU IJmuiden CGU may also incur additional costs in the future under a Netherlands specific carbon tax regime which has the effect of supplementing the price of EU emissions allowances (EUA's) in the EU ETS if they fall below a pre-determined, and increasing, annual threshold. TSN has assessed the impact of the Netherlands specific carbon tax in the value in use calculation and, given the current price of EUA's and expected free allowances, the tax is not expected to lead to any costs in the BU IJmuiden CGU during the 3 years covered by the approved financial budgets and strategic forecasts. The extent of such costs in the longer term is uncertain given the relationship with the price of the EUA's, actual emissions (including the effect of decarbonisation investments), and a changing regulatory landscape (such as the proposed EU carbon border adjustment mechanism). In all cases TSN expects any future costs of the Netherlands specific carbon tax to be mitigated through a variety of different means including the ability to pass these costs via the CO2 surcharge or in the longer term via decarbonisation of the asset base.

The technological shift to DRI and a large scale use of green hydrogen envisaged to enable the transition to carbon neutral steel will require significant, but at this stage not yet detailed long term investments that will be conditional upon national energy infrastructure, requirements for a global level playing field for the steel industry (e.g. EU Carbon Border Adjustment Mechanism), and other government legislation. TSN ultimately expects the cost for decarbonisation not to be borne by the steel industry but by society, either through higher steel selling prices or through government intervention whereby investments in decarbonisation are enabled through government assistance. Given these major uncertainties around decarbonisation, TSN's best estimate is that these significant investments should not be factored into the VIU projections at the current time.

However, whilst recognising the current uncertainties around decarbonisation but at the same time reflecting TSN's ambition to pursue aforementioned decarbonisation strategy, initial modelling has also been prepared to consider the potential impact of decarbonisation by considering an alternative fair value less cost of disposal (FV) model for the BU IJmuiden CGU. The FV model uses cash flow forecasts based on the most recently approved financial budgets and strategic forecasts which cover a period of three years and future projections taking the analysis out to perpetuity which includes capital expenditure for decarbonisation as well as estimated changes to EBITDA due to operating those assets. Key assumptions for the FV model are expected changes to selling prices and raw material costs, EU steel demand, energy costs, exchange rates, the amount of capital expenditure needed for decarbonisation, the changes to EBITDA resulting from producing and selling low CO2 steel, and a post-tax discount rate of 6.3%. The estimates for future capital expenditure for decarbonisation are based on management's internal estimates of implementing the DRI route as well as management's view as to what level of government support may be available.

The FV model considers the impact of decarbonisation on capital expenditure and EBITDA in the event that decarbonisation projects were to become committed in future years. In such a case, whilst there may be some impact on certain assets (e.g. any net book value on assets which were to be taken out of service may need to be impaired or depreciated over a shorter period of time), the conclusion of the FV model is the same as that under the VIU model in that there is sufficient headroom not to require impairment, given that there is no expectation of a significant reduction in profitability resulting from the decarbonisation of the steel making assets. The key assumptions which support this view are:

- The expectation that government support will be provided to TSN for the initial capital expenditure on decarbonisation assets,
- The national government will invest in infrastructure to support the new steel making technology in order to enable the Netherlands to transition to net zero (e.g. hydrogen infrastructure, or increased renewables to support green electricity supply),
- The policy environment in the Netherlands and the EU is supportive to the European steel industry and that the Netherlands wishes to retain a domestic steel industry, and
- Demand for steel will increase from the transition to net zero (e.g. more projects which require steel) and customers will be willing to pay a higher premium for steel which has lower CO2 content.

If any of the above key assumptions were to change then there is a risk that the headroom in the FV model would reduce and that the reduction in the headroom could be sizeable leading to significant impairments of goodwill and PPE. However, TSN believes the key assumptions made, represent the most likely impact from decarbonisation at this point in time. These key assumptions will be kept under review in future years especially if investments in decarbonisation capital expenditure become committed.

For the value in use model a nil growth rate is used to extrapolate the cash flow projections beyond the three-year period of the financial budgets up until the fifteenth year, at which point a 1.8% growth rate is used on future cashflows into perpetuity. The pre-tax discount rate of 8.4% (2021: 8.1%) is derived from the Group's weighted average cost of capital ('WACC') and the WACCs of its main European steel competitors. For the FV model a nil growth rate is used to extrapolate the cash flow projections beyond the three-year period of the financial budgets up until 2040, at which point a 1.8% growth rate is used on future cashflows into perpetuity. The post-tax discount rate of 6.3% is derived from the Group's weighted average cost of capital ('WACC') and the WACCs of its main European steel competitors. The outcome of the Group's impairment test as at 31 March 2022 for the BU IJmuiden CGU resulted in no impairment of PPE (2021: €nil).

The outcome of the test for the Group's other CGUs indicated that the value in use was higher than the carrying value of PPE, except for the Tubes Nederland business. Accordingly an impairment charge of €5m (2021: €15m) has been recognised in the year. This impairment consists €2m for Tubes Nederland and €3m for specific assets at Business Unit IJmuiden.

Net book value as at March	2022 €m	2021 €m
The net book value of land and buildings compromises:		
Freehold	**217**	188
Short leasehold (in less than 50 years expired)	**65**	68
	282	256
Which may be further analysed as:		
Assets held under lease:		
Cost	**117**	117
Accumulated depreciation	**(52)**	(48)
	65	69
Owned assets	**217**	187
	282	256

The net book value of plant and machinery compromises:		
Assets held under lease:		
Cost	**143**	132
Accumulated depreciation	**(101)**	(94)
	42	38
Owned assets	**1,214**	1,125
	1,256	1,163

There were no borrowing costs capitalised during the year (2021: nil).

10. Equity accounted investments

	Interest in joint ventures €m	Investments in associates €m	2022 Total €m	2021 Total €m
Cost at beginning and end of period	7	8	**15**	15
Share of post-acquisition reserves at beginning of period	12	12	**24**	27
Share of results in period retained	9	4	**13**	3
Dividends	-	-	**-**	(6)
Share of post-acquisition reserves at end of period	21	16	**37**	24
Net book value at end of period	28	24	**52**	39
Net book value at beginning of period	19	20	**39**	42

For further details of these companies, please refer to note 34. Subsidiaries and investments.

(i) Summarised information in respect of the Group's joint ventures is presented below:

	2022 €m	2021 €m
The share of assets and liabilities of the Group's joint ventures is as follows:		
Non-current assets	**11**	13
Current assets	**37**	23
Current liabilities	**(19)**	(14)
Non-current liabilities	**(1)**	(3)
Group's share of net assets	**28**	19

The share of revenue and expenses of the Group's joint ventures are as follows:		
Revenue	**109**	72
Expenses	**(100)**	(72)
Group's share of joint ventures' profit for the period	**9**	-
Dividend received	**-**	(4)
Group's share of retained profit for the period	**9**	(4)

(ii) Summarised information in respect of Group's associates is presented below:

As at 31 March	2022 €m	2021 €m
Summarised balance sheet information		
Total assets	**131**	100
Total liabilities	**(56)**	(39)
Net assets	**75**	61
Group's share of net assets	**24**	20
Summarised income statement information		
Revenue	**431**	260
Profit for the period	**17**	10
Group's share of associates profit for the period	**4**	3
Dividend received	**-**	(2)
Group's share of retained profit for the period	**4**	1

(iii) The share of post-tax profits of joint ventures and associates as disclosed in the income statement arose as follows:

	2022 €m	2021 €m
Group's share of joint ventures' profit for the period	**9**	-
Group's share of associates profit for the period	**4**	3
Sale adjustment	**-**	3
Total profit on joint ventures and associates for the year	**13**	6

On 12 February 2022, the Group completed the sale of its share in Albi Profils SARL for a total consideration of €0.3m. This resulted in a profit on disposal of €0.3m.

11. Other investments

	Other loans and receivables €m	Other investments €m	2022 Total €m	2021 Total €m
Carrying value at beginning and end of period	4	2	**6**	**6**

12. Other non-current assets

As at 31 March	2022 €m	2021 €m
Other receivables	**3**	3

13. Inventories

As at 31 March	2022 €m	2021 €m
Raw materials and consumables	**719**	301
Work in progress	**465**	310
Finished goods and goods for resale	**554**	332
	1,738	943

The value of inventories above is stated after impairment of €27m (2021: €28m) for obsolescence and write-downs to net realisable value. Work in progress includes semi-finished and partly processed materials.

14. Current tax

2022	**Assets €m**	**Liabilities €m**
Dutch corporation tax	**88**	**(238)**
Other corporation tax	**5**	**(9)**
	93	**(247)**

2021	Assets €m	Liabilities €m
Dutch corporation tax	83	(5)
Other corporation tax	6	(1)
	89	(6)

As at 31 March 2022 the Dutch corporation tax balances contain a €150m net payable owed to TSNH (2021: net receivable of €78m).

15. Trade and other receivables

As at 31 March	**2022 €m**	2021 €m
Trade receivables	**652**	357
Less provision for expected credit losses	**(4)**	(5)
	648	352
Amounts owed by other Tata Steel companies (Note 33)	**179**	204
Amounts owed by joint ventures (Note 33)	**8**	14
Amounts owed by associates (Note 33)	**25**	15
Derivative financial instruments (Note 21)	**47**	28
Other taxation	**15**	11
Prepayments	**19**	23
Other receivables	**67**	53
Loans to other Tata Steel companies (Note 33)	**82**	82
Loans to joint ventures (Note 33)	**4**	-
	1,094	782

(i) Trade receivables are further analysed as follows:

As at 31 March 2022	**Gross amount €m**	**Subject to credit insurance cover €m**	**Impairment provision €m**	**Net credit risk €m**
Amounts not yet due	**553**	**(493)**	**-**	**60**
One month overdue	**53**	**(50)**	**-**	**3**
Two months overdue	**15**	**(14)**	**-**	**1**
Three months overdue	**-**	**-**	**-**	**-**
Greater than three months overdue	**18**	**(14)**	**(4)**	**-**
	639	**(571)**	**(4)**	**64**

As at 31 March 2021	Gross amount €m	Subject to credit insurance cover €m	Impairment provision €m	Net credit risk €m
Amounts not yet due	292	(266)	-	26
One month overdue	29	(27)	-	2
Two months overdue	18	(16)	-	2
Three months overdue	3	(3)	-	-
Greater than three months overdue	15	(10)	(5)	-
	357	(322)	(5)	30

The Group considers its maximum exposure to credit risk with respect to third party customers at 31 March 2022 to be €64m (2021: €30m), which is the fair value of trade receivables (after impairment provisions) less those that are subject to credit insurance cover as shown in the table above. The other classes of financial assets within trade and other receivables do not contain impaired assets. There is no concentration of credit risk with any particular third party customer.

Credit risk management is discussed further in Note 21(d).
(ii) Movements in the provision for impairment of receivables are as follows:

	2022 €m	2021 €m
At beginning of period	**5**	6
Impairments in the period (Note 2)	**2**	1
Amounts utilised, exchange rate translation and other movements	**(3)**	(2)
At end of period	**4**	5

(iii) The loans to other Tata Steel companies include amounts of €86m (2021: €82m) at a weighted average floating interest rate of 2.2% (2021: 2.8%).

(iv) The loans to other Tata Steel companies at 31 March 2022 of €86m (2021: €82m) are denominated in Euros (2021: denominated in Euros).

(v) Loans to other Tata Steel companies at 31 March 2022 include a loan to TSNH of €69m (2021: €19m) and a loan to Tata Steel UK Limited ('TSUK') of €nil (2021: €50m). In view of the full guarantees for these loans that have been provided by T S Global Holdings Pte Ltd ('TSGH') to TSN, Management is confident that these loans are fully recoverable. The loans are scheduled to be settled on 30 June 2022.

(vi) Amounts owed by other Tata Steel companies include trade receivables of €50m (2021: €136m) owed by TSUK and €129m (2021: €68m) owed by other Tata Steel companies.

16. Cash and short-term deposits

As at 31 March	2022 €m	2021 €m
Cash at bank and in hand	**599**	82
	599	82

The currency of cash balances of the Group is as follows:

	2022 €m	2021 €m
Sterling	**24**	22
Euros	**471**	24
US Dollars	**96**	26
Other currencies	**8**	10
	599	82

The cash balances disclosed above and in the statement of cash flows are not subject to regulatory restrictions and are therefore available for general use.

17. Assets and liabilities classified as held for sale

The major classes of assets and liabilities comprising the operations classified as held for sale are as follows:

	2022 €m	2021 €m
Property, plant and equipment	**2**	-
Inventories	**16**	-
Trade and other receivables	**22**	-
Write down to fair value less costs to sell	**(11)**	-
Total assets classified as held for sale	**29**	-
Trade and other payables	**19**	-
Provisions and other liabilities	**3**	-
Retirement benefit obligations	**1**	-
Total liabilities classified as held for sale	**23**	-

On 1 April 2022, the Group completed the sale of one of its subsidiaries, Tata Steel France Bâtiment et Systèmes SAS ('TSFBS'). Accordingly, as at 31 March 2022, the TSFBS disposal group was classified as held for sale. Following this classification, a write

down of €11m was recognised to reduce the carrying amount of the assets in the disposal group to their fair value less costs to sell. The impairment has been included in the income statement within operating costs (Note 2).

18. Trade and other payables

As at 31 March	2022 €m	2021 €m
Trade payables	**738**	484
Amounts owed to other Tata Steel companies	**336**	44
Amounts owed to associates	**4**	4
Amounts owed to joint ventures	**2**	-
Other taxation and social security	**66**	74
Capital expenditure creditors	**146**	116
Interest payable	**2**	-
Derivative financial instruments (Note 21)	**4**	-
Derivative financial instruments owed to group companies (Note 21 + Note 33)	**7**	4
Other payables	**476**	366
	1,781	1,092

Other payables include amounts provided in respect of insurances, holiday pay, other employment costs including COVID-19 employment support from Governments for which the Group has received cash but not qualified for the grant and sundry other items.

19. Borrowings

	2022 €m	2021 €m
Current:		
Bank and other loans	**1**	1
Loans from other Tata Steel companies	**8**	6
Lease liabilities	**19**	17
	28	24

	2022 €m	2021 €m
Non-current:		
Lease liabilities	**78**	82
Bank and other loans	**2**	3
	80	85
Total borrowings	**108**	109

(i) The currency and interest rate exposure of gross borrowings of the Group at the end of the period is as follows:

	2022				2021			
	Fixed rate borrowings €m	**Floating rate borrowings €m**	**Zero rate borrowings €m**	**Total €m**	Fixed rate borrowings €m	Floating rate borrowings €m	Zero rate borrowings €m	Total €m
Euros	**97**	**-**	**8**	**105**	100	-	6	106
USD	**2**	**-**	**-**	**2**	2	-	-	2
Other	**1**	**-**	**-**	**1**	1	-	-	1
Total	**100**	**-**	**8**	**108**	103	-	6	109

	2022		2021	
	Weighted average fixed interest rate %	**Weighted average time for which rate is fixed Years**	Weighted average fixed interest rate %	Weighted average time for which rate is fixed Years
Euros	**4.3**	**4.1**	4.3	6.4

The weighted average interest rate on short-term borrowings from other Tata Steel companies was nil% (2021: nil%).

(ii) The maturity of borrowings is as follows:

	2022 €m	2021 €m
In one year or less or on demand	**31**	27
Between one and two years	**16**	17
Between two and three years	**33**	13
Between three and four years	**10**	17
Between four and five years	**9**	9
More than five years	**20**	38
	119	121
Less: amounts representing interest in future minimum lease payments	**(11)**	(12)
	108	109
Analysed as:		
Current liabilities	**28**	24
Non-current liabilities	**80**	85

(iii) Amounts payable under leases are as follows:

	Minimum lease payments		Present value of minimum lease payment	
	2022 €m	2021 €m	**2022 €m**	2021 €m
Not later than one year	**22**	20	**19**	17
Later than one year but not more than five years	**66**	53	**59**	47
More than five years	**20**	38	**19**	35
	108	111	**97**	99
Less: future finance charges on leases	**(11)**	(12)	**-**	-
Present value of lease liabilities	**97**	99	**97**	99

The lease portfolio of the Group consists of leases of land, building, machinery and vehicles.

(iv) The maturity of undrawn committed borrowing facilities of the Group is as follows:

	2022 €m	2021 €m
Not later than one year	**150**	-
Later than one year but not more than five years	**400**	550
	550	550

TSN has exclusive access to a revolving credit facility of €150m. Each advance would bear interest equal to EURIBOR + 2.20% per annum. As of 31 March 2022 the full €150m was undrawn (31 March 2021: €150m undrawn). See Financial Review on page 8 for further details.

TSN also has an internal loan facility available of €400m with Tata Steel UK Holdings Limited (‘TSUKH’) and TSNH, due to expire in April 2023. Each advance would bear interest equal to LIBOR plus a margin of 0.5% per annum and there are no financial covenants. The full €400m facility was undrawn on 31 March 2022 (31 March 2021: €400m undrawn)

TSUKH and TSNH agreed that in the event the €400m internal loan facility and the €150m RCF are fully drawn by TSN or not available, TSN may approach, at its own discretion and independently, the banking syndicate in TSNH’s SFA directly for additional credit lines.

(v) Furthermore the Group has uncommitted short-term bank facilities in various countries (the Netherlands, France, Germany, Belgium and Switzerland) mostly within the framework of daily treasury operations such as cash pooling but also in order to have guaranteed facilities available related to commercial transactions.

20. Other non-current liabilities

As at 31 March	**2022 €m**	2021 €m
Other taxation and social security	**80**	66
Other creditors	**1**	2
	81	68

Other taxation and social security relates to deferred payroll taxes and are due for repayment within three years. These payroll tax deferrals were granted in response to the COVID 19 pandemic.

21. Financial instruments and risk management

(i) Financial assets and financial liabilities recognised in the balance sheet

The carrying amounts of the Group's financial assets and financial liabilities (excluding derivative assets and liabilities) are:

	2022 €m	2021 €m
Financial assets		
Other loans and receivables (Note 11)	**4**	4
Trade and other receivables (Note 15) [1]	**1,013**	720
Cash and cash equivalents (Note 16)	**599**	82
Other non-current assets (Note 12)	**3**	3
	1,619	809
Financial liabilities		
Financial liabilities at amortised cost:		
Trade and other payables (Note 18) [2]	**(1,704)**	(1,014)
Current borrowings (Note 19)	**(28)**	(24)
Non-current borrowings (Note 19)	**(80)**	(85)
	(1,812)	(1,123)
	(193)	(314)

[1] Excludes derivatives, other taxation and prepayments
[2] Excludes derivatives, other taxation and social security

The carrying amounts of financial assets and financial liabilities recorded at amortised cost in the financial statements approximate their fair values with the exception of current and non-current borrowings. The fair value of these are €28m (2021: €23m) and €78m (2021: €82m) respectively. The fair value of borrowings would be classified as Level 3 within the fair value hierarchy. The fair value is based on discounted cash flows and reflects the credit risk of counterparties.

(ii) Fair value measurements recognised in the balance sheet

The following table categorises the Group's financial instruments held at fair value by the valuation methodology applied in determining this value. Where possible, quoted prices in active markets for identical assets and liabilities are used (Level 1). Where such prices are not available, the asset or liability is classified as Level 2, provided all significant inputs to the valuation model used are based on observable market data (this includes the Group's forward currency and commodity contracts). The Group's derivative financial assets and liabilities are categorised as Level 2 and their valuation is based on future cash flows (estimated from observable data such as forward exchange rates and yield curves) which are, where material, discounted at a rate which reflects the credit risk of counterparties. If one or more of the significant inputs to the valuation model is not based on observable market data, the instrument is classified as Level 3.

2022	Level 1 €m	Level 2 €m	Level 3 €m	**Total €m**
Financial assets at fair value through other comprehensive income:				
Commodity contracts	-	**37**	-	**37**
Forward foreign currency contracts	**-**	**10**	**-**	**10**
	-	**47**	**-**	**47**
Financial liabilities at fair value through other comprehensive income:				
Commodity contracts	**-**	**(9)**	**-**	**(9)**
Forward foreign currency contracts	**-**	**(2)**	**-**	**(2)**
	-	**(11)**	**-**	**(11)**

2021	Level 1 €m	Level 2 €m	Level 3 €m	Total €m
Financial assets at fair value through other comprehensive income:				
Commodity contracts	-	15	-	15
Forward foreign currency contracts	-	14	-	14
	-	29	-	29
Financial liabilities at fair value through other comprehensive income:				
Commodity contracts	-	(4)	-	(4)
Forward foreign currency contracts	-	-	-	-
	-	(4)	-	(4)

There were no transfers between any of the levels during the periods represented above.

(iii) Financial risk management and financial instruments

The Group uses certain financial instruments to reduce business risks arising from its exposure to fluctuations in exchange rates and base metal prices. The instruments used, which are confined principally to forward foreign exchange contracts and London Metal Exchange contracts, involve elements of credit and market rate risk in excess of the amount recognised in the accounts.

Risk management is carried out by a central Treasury department and by a central commodity derivative trading team under policies approved by the BoM. The treasury department as well as the central commodity derivative trading team identify, evaluate and hedge financial risks in close cooperation with the Group's operating units.

(a) Market risk: Foreign exchange risk and management

It is the Group's policy that substantially all the net currency transaction exposure arising from contracted sales and purchases over an approximate 6 month time horizon is hedged by selling or purchasing foreign currency forwards. At 31 March 2022, the notional amounts of outstanding foreign currency contracts was €1,359m (2021: €1,176m) with a net fair value asset of €8m (2021: €14m asset).

As at 31 March 2022, a 10% appreciation of the Euro against the US dollar would decrease the net assets of TSN by approximately €9m (2021: €2m), decrease equity by approximately €9m (2021: €2m) and have no impact on the operating profit (2021: no impact). The sensitivity analysis has been based on the composition of the dollar denominated financial assets and liabilities of the Group at 31 March, excluding trade payables, trade receivables, other non-derivative financial instruments not in debt, and financial lease obligations, all of which do not present a material exposure.

As at 31 March 2022, a 10% appreciation of the Euro against the Sterling would decrease the net assets of TSN by approximately €2m (2021: €2m), decrease equity by approximately €2m (2021: €2m) and have no impact on the operating profit (2021: no impact).

The net positions of the Euro versus other currencies are of less importance and the sensitivity of a 10% weakening/strengthening of the Euro is therefore not significant.

(b) Market risk: Commodity risk and management

The Group makes use of commodity futures contracts to manage its purchase price risk for certain commodities. Forward purchases are made for zinc, tin and nickel to cover sales contracts with fixed metal prices and for carbon emission rights based on predicted future emission deficit. At 31 March 2022 the Group had commodity contracts with a total notional value of €342m (2021: €177m) and a net fair value asset of €28m (2021: €11m asset).

As at 31 March 2022, a 10% decrease of the market prices of zinc, tin, nickel and carbon emission rights would decrease the equity of TSN by approximately €20m (2021: €3m). There was no significant market risk relating to the income statement since the majority of commodity derivatives are treated as cash flow hedges with movements being reflected in equity and the timing and recognition in the income statement depending on the point at which the underlying hedged transactions are also recognised.

(c) Market risk: Interest rate risk and management

The financial structure of the Group includes only a small percentage of net assets that have been financed by loans. During 2022 and 2021, most of the Group's borrowings were denominated in Euros. The Group did not enter into interest rate swap contracts or forward rate agreements. For further details of the borrowings, such as maturity and interest rates, see Note 19.

As at 31 March 2022 the Group had fixed rate borrowings of €100m (2021: €103m), floating rate borrowings €nil (2021: €nil) and zero rate borrowings of €8m (2021: €6m). If at 31 March 2022 the interest rate would have been 100 bps higher/lower, with all other variables held constant, there would be no impact on profit after taxes (2021: no impact). There would also have been no impact on the cashflow (2021: no impact).

(d) Credit risk

Cash deposits, trade receivables and other financial instruments give rise to credit risk for the Group arising from the amounts and obligations due from counter-parties. The credit risk on short-term deposits is managed by limiting the aggregate amount and duration of exposure to any one counter party, depending on its credit rating and other credit information, and by regular reviews of these ratings. The possibility of material loss arising in the event of non-performance is considered unlikely.

Sector sales teams, are responsible for controlling the credit risk arising from the Group's normal commercial operations, although they must act within a series of centrally agreed guidelines. Trade receivables are, where appropriate, subject to a credit insurance programme, and regular reviews are undertaken of exposures to key customers and those where known risks have arisen or still persist. Any expected credit losses are reflected in the income statement.

Credit risk also arises from the possible failure of counter-parties to meet their obligations under currency and commodity hedging instruments. However, counter parties are established banks and financial institutions with high credit ratings and the Group continually monitors each institution's credit quality and limits as a matter of policy the amount of credit exposure to any one of them. The Group's theoretical risk is the cost of replacement at current market prices of these transactions in the event of default by counter-parties. The Group believes that the risk of incurring such losses is remote and underlying principal amounts are not at risk.

(e) Liquidity risk

Liquidity risk is defined as the risk that the Group could not be able to settle or meet its financial liabilities on time and at a reasonable price. The Treasury department is responsible for liquidity and funding, and manages the liquidity risk by maintaining sufficient cash resources and by maintaining the availability of funding through available committed and uncommitted credit facilities, for further information on the credit lines see Note 19. The management of the liquidity risk is based on the calculation of the future net liquidity which results from the expected cash outflows and inflows.

The following table is a maturity analysis of the anticipated contractual cash flows including interest payable for the Group's derivative and non-derivative financial liabilities on an undiscounted basis, which therefore differs from both the carrying value and fair value. Floating interest rate is estimated using the prevailing interest rate at the end of the reporting period. Cash flows in foreign currencies are translated using the period end spot rates at 31 March 2022.

Liquidity risk

	Maturity of contractual undiscounted cash flows			
At 31 March 2022	**Contractual cash flows €m**	**In one year or less or on demand €m**	**Between one and five years €m**	**More than five years €m**
Non-derivative financial liabilities				
Trade and other payables [1]	**(1,704)**	**(1,704)**	**-**	**-**
Borrowings				
Repayment	**(108)**	**(28)**	**(49)**	**(31)**
Fixed interest	**(11)**	**(3)**	**(6)**	**(2)**
	(1,823)	**(1,735)**	**(55)**	**(33)**
Derivative financial (liabilities)/assets				
Foreign currency contracts				
Payables	**(1,349)**	**(1,349)**	**-**	**-**
Receivables	**1,357**	**1,357**	**-**	**-**
Derivatives commodities: net settlement	**28**	**28**	**-**	**-**
	36	**36**	**-**	**-**
Total	**(1,787)**	**(1,699)**	**(55)**	**(33)**

[1] Excludes derivatives, other taxation and social security and advances from customers

	Maturity of contractual undiscounted cash flows			
At 31 March 2021	Contractual cash flows €m	In one year or less or on demand €m	Between one and five years €m	More than five years €m
Non-derivative financial liabilities				
Trade and other payables [1]	(1,014)	(1,014)	-	-
Borrowings				
Repayment	(109)	(24)	(49)	(36)
Fixed interest	(12)	(3)	(7)	(2)
	(1,135)	(1,041)	(56)	(38)
Derivative financial (liabilities)/assets				
Foreign currency contracts				
Payables	(1,162)	(1,162)	-	-
Receivables	1,176	1,176	-	-
Derivatives commodities: net settlement	11	11	-	-
	25	25	-	-
Total	(1,110)	(1,016)	(56)	(38)

[1] Excludes derivatives, other taxation and social security and advances from customers

(iv) Derivative financial instruments

The Group utilises currency and commodity derivatives to hedge significant future transactions and cash flows. These items gave rise to the following fair values that have been recognised in the balance sheet:

	2022		2021	
	Assets €m	**Liabilities €m**	Assets €m	Liabilities €m
Current:				
Commodity contracts	**37**	**(9)**	15	(4)
Forward foreign currency contracts	**10**	**(2)**	14	-
	47	**(11)**	29	(4)

The fair value of derivative financial instruments that were designated as cash flow hedges at the balance sheet date was:

	Forward foreign currency contracts €m	**Commodity contracts €m**	**Taxation €m**	**2022 €m**
Cash flow hedge reserve net of taxation at beginning of period	**13**	**13**	**(6)**	**20**
Fair value recognised	**10**	**11**	**(6)**	**15**
Cash flow hedge reserve net of taxation at end of period	**23**	**24**	**(12)**	**35**

Amounts recognised in the cash flow hedge reserve, excluding deferred tax, are expected to affect profit or loss within one year.

At the balance sheet date, the notional amount of outstanding foreign currency and commodity contracts that the Group has committed to is as follows:

	2022 €m	2021 €m
Commodity contracts	**342**	177
Forward foreign currency contracts	**1,359**	1,176

During the year no ineffectiveness from foreign currency hedges was recognised in the income statement (2021: nil).

22. Provisions for liabilities and charges

	Rationalisation Costs (i) €m	Environmental Provisions (ii) €m	Guarantee commitments (iii) €m	Employee Benefits (iv) €m	Other (v) €m	**2022 Total €m**	2021 Total €m
At beginning of period	3	140	7	99	4	**253**	193
Charged to income statement	8	141	1	2	11	**163**	119
Released to income statement	-	-	-	(6)	(1)	**(7)**	(8)
Utilised during the period	(7)	(95)	(1)	-	(1)	**(104)**	(51)
At end of period	4	186	7	95	13	**305**	253
Analysed as:							
Current liabilities						**149**	134
Non-current liabilities						**156**	119

(i) Rationalisation costs include redundancy provisions as follows:

	2022 €m	2021 €m
At beginning of period	**3**	14
Charged to income statement (Note 4)	**8**	11
Utilised during the period	**(7)**	(22)
At end of period	**4**	3

(ii) The environmental provisions consist of remediation and clean-up activities that are likely to be undertaken in the foreseeable future and of which the costs can reasonably be estimated, together with provisions for purchase of CO_2 emission rights.

(iii) Guarantee commitments relate to the anticipated cost of any warranties offered to customers.

(iv) Provisions for employee benefits include long–term benefits such as long service and sabbatical leave, disability benefits and sick leave. All items are subject to independent actuarial assessments.

(v) 'Other' includes a net release of provisions of €nil (2021: net charge of €3m) for costs in respect of anticipated customer claims.

23. Deferred tax

The following is the analysis of the deferred tax balances for balance sheet purposes:

	2022 €m	2021 €m
Deferred tax assets	**125**	78
Deferred tax liabilities	**(1)**	-

The following are the major deferred tax assets and liabilities recognised by the Group, and the movements thereon, during the current and prior period.

2022	**Accelerated tax depreciation €m**	**Pension €m**	**Inventory €m**	**Provisions €m**	**Losses €m**	**Other €m**	**Total €m**
At beginning of period	19	7	3	53	-	(4)	**78**
Credited/(charged) to income statement	5	14	(1)	21	10	**8**	**57**
Charged to other comprehensive income	-	(6)	-	-	-	**(5)**	**(11)**
At end of period	24	15	2	74	10	**(1)**	**124**

2021	Accelerated tax depreciation €m	Pension €m	Inventory €m	Provisions €m	Losses €m	Other €m	Total €m
At beginning of period	17	4	3	37	-	3	64
Credited/(charged) to income statement	2	3	-	16	-	-	21
Charged to other comprehensive income	-	-	-	-	-	(7)	(7)
At end of period	19	7	3	53	-	(4)	78

Deferred tax assets of €125m (2021: €78m) have been recognised at 31 March 2022. In evaluating whether it is probable that taxable profits will be earned in future accounting periods, all available evidence was considered, including TSN Supervisory Board approved budgets and forecasts. Following this evaluation, it was determined there would be sufficient taxable income generated to realise the benefit of the deferred tax assets. Deferred tax assets have not been recognised in respect of total tax losses of €215m (2021: €335m) which have no expiry date. Deferred tax assets have also not been recognised on deductible temporary differences of €50m (2021: €86m) which have no expiry.

At the balance sheet date there are temporary differences associated with undistributed earnings of subsidiaries. No liability has been recognised in respect of these differences because the vast majority of these differences occur in the Netherlands, for which the participation exemption applies.

Of the net deferred tax asset of €125m as at 31 March 2022, €5m is expected to be utilised within the next 12 months.

24. Deferred income

	2022 Grants relating to property, plant and equipment €m	2021 **Grants relating to property, plant and equipment €m**
At beginning of period	**3**	4
Released to income statement (Note 2)	**(1)**	(1)
At end of period	**2**	3

25. Called-up share capital

For more detailed information on called-up share capital, see Company Accounts, Note 8.

26. Future capital expenditure

	2022 €m	2021 €m
Contracted but not provided for	**204**	78
Authorised but contracts not yet placed	**439**	331

27. Exposure for cash outflows relating to leases

	2022 €m	2021 €m
Future exposure for cash outflows to the Group at the end of the period are:		
Future cash outflows relating to termination and extension options	**1**	1
Future cash outflows relating to leases committed but not yet commenced	**27**	7
	28	8

28. Contingencies

	2022 €m	2021 €m
Guarantees given under trade agreements	**28**	34
Others	**8**	8

Tata Steel Nederland is party to a number of individual administrative proceedings on environmental matters and contingent claims which result from ordinary activities that are pending as of 31 March 2022 or can potentially be exercised against Tata Steel Nederland in the future. The related risks were analysed with a view to their probability of occurrence. No amount has been recorded in these financial statements on the basis that the Group does not consider it virtually certain that an amount will be received or no reliable estimate can yet be made for amounts to be paid (if any).

29. Reconciliation of net cash flow to movement in net funds

	2022 €m	2021 €m
Movement in loans to other Tata Steel companies	**4**	(4)
Movement in cash and short-term deposits	**517**	38
Movement in debt	**17**	21
Change in net debt resulting from cash flows in period	**538**	55
Effect of other non-cash movements	**(16)**	(142)
Movement in net debt in period	**522**	(87)
Net funds at beginning of period	**55**	142
Net funds at end of period	**577**	55

30. Analysis of changes in net funds

	1 April 2021 €m	Cash Flow €m	Other non-cash movements €m	**31 March 2022 €m**
Loans to other Tata Steel companies	82	4	-	**86**
Cash at bank and short-term deposits	82	517	-	**599**
Cash and cash equivalents	82	517	-	**599**
Borrowings	(10)	(1)	-	**(11)**
Lease liabilities	(99)	18	(16)	**(97)**
Total debt excluding bank overdrafts	(109)	17	(16)	**(108)**
Total net funds	55	538	(16)	**577**

Other non-cash movements include lease liability additions in 2022 of €16m (2021: €9m).

31. Pensions and post-retirement benefits

Defined contribution schemes
TSN participates in a number of defined contribution plans on behalf of relevant personnel. Any expense recognised in relation to these schemes represents the value of contributions payable during the period by TSN at rates specified by the rules of those plans. The only amounts included in the balance sheet are those relating to the prior month's contributions that were not due to be paid until after the end of the reporting period. The total cost charged to the income statement in 2022 amounted to €100m (2021: €100m). Of the total cost of €100m, €96m (2021: €95m) related to payments to the Stichting Pensioenfonds Hoogovens ('SPH') pension scheme.

Defined benefit schemes
TSN operates a number of defined benefit pension and post-retirement schemes. There are multiple plans, the most significant of which are in Germany and the USA. Benefits offered by these schemes are largely based on pensionable pay and years of service at retirement. With the exception of plans in Germany and France, the assets of these schemes are held in administered funds that are legally separated from the company. The trustees of the pension fund are required by law to act in the interest of the fund and of all relevant stakeholders of the scheme, and are responsible for the investment policy with regard to the assets of the fund.

Within Germany, there are three types of defined benefit pension schemes, two of which are closed to new entrants. All of the schemes are unfunded. The scheme for active members in Germany is a pension commitment based on a percentage of the yearly income paid via the pension organisation 'Essener Verband'. The defined benefit schemes in the USA are closed for future accrual. TSN makes sufficient contributions required to fund the cost of benefits provided by the USA schemes and to increase the funding ratio to 100% over a period of 15 years. Pension provision for new entrants in the USA is by means of a defined contribution scheme.

TSN accounts for all pension and post-retirement benefit arrangements using IAS 19 '*Employee Benefits*' with independent actuaries being used to calculate the costs, assets and liabilities to be recognised in relation to these schemes. The present value of the defined benefit obligation, the current service cost and past service costs are calculated by these actuaries using the projected unit credit method. However, the ongoing funding arrangements of each scheme, in place to meet their long-term pension liabilities, are governed by the individual scheme rules and national legislation. The accounting and disclosure requirements of IAS 19 do not affect these funding arrangements.

Actuarial assumptions
A range of assumptions must be used to determine the IAS 19 amounts and the values to be included in the balance sheet and income statement can vary significantly with only small changes in these assumptions. Furthermore, the actuarial assumptions used may vary according to the country in which the plans are situated.

The key assumptions applied at the end of the reporting period for the purposes of the actuarial valuations were as follows:

2022	Germany %	USA %	Other %
Salary growth	2.00	2.00	1.00 to 2.50
Pension increases	1.75	0.00	0.00
Discount rate	1.80	4.00	0.50 to 1.60
Inflation	2.00	3.00	1.00 to 2.00

2021	Germany %	USA %	Other %
Salary growth	2.00	2.00	1.00 to 2.00
Pension increases	1.75	0.00	0.00
Discount rate	0.84	3.00	0.40 to 0.70
Inflation	2.00	3.00	1.00 to 1.70

The discount rate is set with reference to the current rate of return on AA rated corporate bonds of equivalent currency and term to the scheme liabilities. Projected inflation rates and pension increases are long-term predictions based mainly on the yield gap between long-term fixed interest and government bond securities.

Demographic assumptions are set having regard to the latest trends in life expectancy, plan experience and other relevant data, including externally published actuarial information within each national jurisdiction. The assumptions are reviewed and updated as necessary as part of the periodic actuarial funding valuations of the individual pension and post-retirement plans.

Income statement costs
Under IAS 19 costs in relation to pension and post-retirement plans mainly arise as follows:

- The current service cost is the actuarially determined present value of the pension benefits earned by employees in the current period. It excludes any charges or credits in respect of any deficit or surplus in the scheme respectively and so the cost is unrelated to whether, or how, the scheme is funded.

- Net interest cost / (income) on the liability or asset recognised in the balance sheet.

These items are treated as a net operating cost in the income statement within employment costs.

Variations from expected costs, arising from the experience of the plans or changes in actuarial assumptions, are recognised immediately in the statement of comprehensive income. Examples of such variations are differences between the discount rate used for calculating the return on scheme assets and the actual return, the remeasurement of scheme liabilities to reflect changes in discount rates, changes in demographic assumptions such as using updated mortality tables, or the effect of more employees leaving service than forecast.

Income statement pension costs arose as follows:

2022	Netherlands €m	Germany €m	USA €m	Other €m	**Total €m**
Current service cost	-	1	-	1	2
Net interest cost	-	1	1	-	2
Past service credit	-	-	-	(1)	(1)
Defined benefit schemes	-	2	1	-	3
Defined contribution schemes	96	-	-	4	100
Total charge for the period	96	2	1	4	**103**

2021	Netherlands €m	Germany €m	USA €m	Other €m	Total €m
Current service cost	-	1	-	1	2
Net interest cost	-	1	1	-	2
Defined benefit schemes	-	2	1	1	4
Defined contribution schemes	95	-	1	4	100
Total charge for the period	95	2	2	5	104

Plan assets

The asset classes of plan assets of the Groups' defined benefit schemes include national and international equities, fixed income government and non-government securities and real estate. The pension funds invest in diversified asset classes to maximise returns while reducing volatility. The percentage of total plan assets for each category of investment was as follows:

2022	USA %	Other[1] %
Quoted:		
Equities	36.3	33.0
Bonds – Fixed Rate	-	26.3
Other[1]	8.7	-
	45.0	**59.3**
Unquoted:		
Real estate	-	22.1
Cash and cash equivalents	55.0	4.8
Other[1]	-	13.8
	55.0	**40.7**
Total	**100.0**	**100.0**

2021	USA %	Other %
Quoted:		
Equities	**63.5**	**33.7**
Bonds – Fixed Rate	**16.3**	**28.2**
Other[1]	**15.7**	**-**
	95.5	**61.9**
Unquoted:		
Real estate	**2.0**	**20.7**
Cash and cash equivalents	**2.5**	**4.9**
Other[1]	**-**	**12.5**
	4.5	**38.1**
Total	**100.0**	**100.0**

[1]Other predominantly relates to Montana Bausysteme AG.

Balance sheet measurement

In determining the amounts to be recognised in the balance sheet the following approach has been adopted:

- Pension scheme assets are measured at fair value (for example for quoted securities this is the bid-market value on the relevant public exchange).
- Pension liabilities include future benefits that will be paid to pensioners and deferred pensioners, and accrued benefits which will be paid in the future for members in service taking into account projected earnings. As noted above, the pension liabilities are discounted with reference to the current rate of return on AA rated corporate bonds of equivalent currency and term to the pension liability.

Amounts recognised in the balance sheet arose as follows:

2022	Germany €m	USA €m	Other €m	**Total €m**
Fair value of plan assets at end of period	-	92	25	117
Present value of obligation at end of period	(67)	(113)	(27)	(207)
Defined benefit liability at end of period	(67)	(21)	(2)	**(90)**
Disclosed as:				
Defined benefit asset	-	-	1	**1**
Defined benefit liability - current	-	-	(1)	(1)
Defined benefit liability - non current	(67)	(21)	(2)	(90)
Defined benefit liability at end of period	(67)	(21)	(2)	**(90)**

2021	Germany €m	USA €m	Other €m	Total €m
Fair value of plan assets at end of period	-	89	22	111
Present value of obligation at end of period	(81)	(121)	(30)	(232)
Defined benefit liability at end of period	(81)	(32)	(8)	(121)
Disclosed as:				
Defined benefit liability - current	-	-	(1)	(1)
Defined benefit liability - non current	(81)	(32)	(7)	(120)
Defined benefit liability at end of period	(81)	(32)	(8)	(121)

The movements in the present value of plan assets and defined benefit obligations in 2022 and 2021 were as follows:

2022	Germany €m	USA €m	Other €m	**Total €m**
Plan assets:				
As at 1 April 2021	-	89	22	111
Return on plan assets (less than)/greater than the discount rate	-	(4)	1	(3)
Interest income on plan assets	-	3	-	3
Contributions from the employer	-	7	1	8
Benefits paid	-	(8)	(1)	(9)
Exchange rate movements	-	5	2	7
As at 31 March 2022	**-**	**92**	**25**	**117**
Benefit obligations:				
As at 1 April 2021	(81)	(121)	(30)	(232)
Current service cost	(1)	-	(1)	(2)
Past service credit	-	-	1	1
Interest cost on the defined benefit obligation	(1)	(4)	-	(5)
Actuarial gain due to financial assumption changes	12	10	1	23
Actuarial gain due to actuarial experience	1	-	-	1
Actuarial gain due to demographic assumption changes	-	-	1	1
Benefits paid	3	8	1	12
Transfer to held for sale	-	-	1	1
Exchange rate movements	-	(6)	(1)	(7)
As at 31 March 2022	(67)	(113)	(27)	**(207)**

Included within other schemes above are post-retirement medical and similar net obligations of €5m (2021: €5m).

2021	Germany €m	USA €m	Other €m	**Total €m**
Plan assets:				
As at 1 April 2020	-	79	23	102
Actuarial gain due to financial assumption changes	-	14	-	14
Interest income on plan assets	-	2	-	2
Contributions from the employer	-	6	-	6
Benefits paid	-	(8)	1	(7)
Exchange rate movements	-	(4)	(2)	(6)
As at 31 March 2021	**-**	**89**	**22**	**111**
Benefit obligations:				
As at 1 April 2020	(72)	(134)	(29)	(235)
Current service cost	(1)	-	(1)	(2)
Interest cost on the defined benefit obligation	(1)	(3)	-	(4)
Actuarial loss due to financial assumption changes	(10)	(2)	-	(12)
Actuarial gain due to actuarial experience	1	-	-	1
Benefits paid	2	8	1	11
Exchange rate movements	-	10	(1)	9
As at 31 March 2021	(81)	(121)	(30)	**(232)**

Actuarial gains recorded in the Statement of Comprehensive Income for the period were €22m (2021: gain of €3m).

32. Disposal of Group companies

On 31 March 2022 Tata Steel France Bâtiment et Systèmes SAS (‘TSFBS’) which is a subsidiary within the Group, sold its interest in the Catnic France business to Tata Steel UK. Consideration of €1m was received and net assets of €1m were transferred as a result of the sale, hence there was no gain or loss in relation to this disposal.

TSFBS itself was subsequently sold following the balance sheet date on 1 April 2022, see note 17 for further details.

33. Related party transactions

The table below sets out details of transactions and loans between TSN, other Tata Steel companies, joint ventures and associates.

	2022 €m	2021 €m
Sales to joint ventures	**126**	75
Sales to associates	**218**	105
Sales to other Tata Steel companies	**581**	330
Purchases from joint ventures	**3**	-
Purchases from associates	**39**	33
Purchases of raw materials from other Tata Steel companies, acting as an agent	**1,876**	1,150
Other purchases from other Tata Steel companies	**349**	240
Net recharges to other Tata Steel companies	**(46)**	(35)
Amounts owed by other Tata Steel companies (Note 15)	**179**	204
Amounts owed by joint ventures (Note 15)	**8**	14
Amounts owed by associates (Note 15)	**25**	15
Derivative financial instruments owed to Group companies (Note 18)	**7**	4
Amounts owed to other Tata Steel companies (Note 18)	**336**	44
Amounts owed to associates (Note 18)	**4**	4
Amounts owed to joint ventures (Note 18)	**2**	-
Tax payable/(receivable) to TSNH (Note 14)	**150**	(78)
Loans to TSNH (Note 15)	**69**	19
Loans to other Tata Steel companies (Note 15)	**13**	63
Loans to joint ventures (Note 15)	**4**	-

Loans from other Tata Steel companies (Note 19)	**8**	6

Under the terms of the Policy for Surplus Cash agreed between TSN, Tata Steel UK Limited ('TSUK') and TSNH, a short-term loan of €100m was granted by TSN to TSNH bearing a floating interest rate based on Euribor. The outstanding balance on this loan as at 31 March 2022 was €19m (31 March 2021: €19m). The interest rate and other conditions of this loan are in conformity with market conditions. Furthermore, on 31 March 2022 TSN has provided TSNH with a €50m (31 March 2021: nil) overnight loan. This facility was transferred from TSIJ BV to TSN BV in July 2021.

TSN's Treasury department and a central commodity derivative trading team are responsible for the external hedging of currency and metal risks. They also enter into transactions with TSUK Treasury and other Tata Steel subsidiaries, which are not part of TSN. As at 31 March 2022 the fair value of the currency contracts with these parties was €nil (31 March 2021: €3m liability) and the fair value of the metal contracts with these parties amounted to a liability of €7m (31 March 2021: liability of €1m).

Transactions with related parties are made on terms equivalent to those that prevail in arm's length transactions.

Details of transactions with key management personnel are given in 'Further notes to and signing of the annual accounts' on page 65.

34. Subsidiaries and investments

The subsidiary undertakings, joint ventures, joint operations and associates of TSN at 31 March 2022 are set out below. Country names are countries of incorporation. Undertakings operate principally in their country of incorporation except where otherwise stated.

Unless indicated otherwise, subsidiary undertakings are wholly owned within TSN, and TSN holding comprises ordinary shares and 100% of the voting rights.

Subsidiary undertakings
Steel producing, further processing or related activities:

Belgium
Société Européenne de Galvanisation (Segal) SA
Tata Steel Belgium Packaging Steels N.V.
Tata Steel Belgium Services NV

France
Corbeil Les Rives SCI (67.3%)
Inter Metal Distribution (I.M.D.) SAS
Tata Steel France Holdings SAS
Tata Steel France Bâtiments et Systèmes SAS (i)
Tata Steel International (France) SAS
Tata Steel Maubeuge SAS
Unitol SAS

Finland
Naantali Steel Service Centre OY

Germany
Degels GmbH
Fischer Profil GmbH
Hille & Müller GmbH
S.A.B. Profil GmbH
Service Center Gelsenkirchen GmbH
Tata Steel Germany GmbH
Tata Steel International (Germany) GmbH

Italy
Tata Steel International (Italia) SRL

The Netherlands
C.V. Bénine (76.93%)
Demka B.V.
Huizenbezit Breesaap B.V.
S.A.B.Profiel B.V.
Staalverwerking en Handel B.V.
Tata Steel IJmuiden B.V.
Tata Steel Nederland Consulting & Technical Services B.V.
Tata Steel Nederland Services B.V.
Tata Steel Nederland Technology B.V.
Tata Steel Nederland Tubes B.V.

Sweden
Halmstad Steel Service Centre AB

Switzerland
Montana Bausysteme AG

USA
Apollo Metals, Ltd
Hille & Müller USA, Inc
Hoogovens USA, Inc
Oremco, Inc (70%)
Rafferty - Brown Steel Co. Inc. of Conn.
Tata Steel USA, Inc
Thomas Processing Comp.
Thomas Steel Strip Corp.

(i) Sold on 1 April 2022

Joint ventures, joint operations and associates

	Classification	Products	2021 Turnover €m		Issued capital Number of shares	% held
Mexico						
Hoogovens Gan Multimedia SA de CV	Joint Venture	Inactive company (in liquidation)	-	-	-	50
The Netherlands						
GietWalsOnderhoudCombinatie B.V.	Associate	Maintenance of parts of direct sheet plant	11	Shares of €454	100	50
Hoogovens Court Roll Surface Technologies VOF	Joint Operation	Processing chrome deposit on rolls	4	-	-	50
Laura Metaal Holding B.V.	Joint Venture	Trading and processing of non-prime metal	142	Shares of €454	5,600	49
Wupperman Staal Nederland B.V.	Associate	Purchase, process, refine and sale of steel products and other metal products	249	Shares of €1,000	8,000	30
Norway						
Norsk Stal Tynnplater AS	Joint Venture	Processing of strip and long products	80	Shares of NOK1,000	26,500	50

35. Events after the reporting period

On 1 April 2022, the Group completed the sale of its subsidiary, Tata Steel France Bâtiments et Systèmes SAS for €nil profit on disposal.

36. Ultimate and immediate parent company

Tata Steel Netherlands Holdings B.V. is the company’s immediate parent company, which is incorporated and registered in the Netherlands.

Tata Steel Limited, a company incorporated in India, is the ultimate parent company and controlling party.

Copies of the Report & Accounts for TSL may be obtained from its registered office at Bombay House, 24 Homi Mody Street, Mumbai, 400 001.

Company income statement

For the financial period ended 31 March

	2022 €m	2021 €m
Profit / (Loss) subsidiaries	**733**	(179)
Other income and charges, after taxation	**(3)**	40
Net profit / (loss) after taxation	**730**	(139)

Company balance sheet

As at 31 March Before appropriation of the result for the year	Note	2022 €m	2021 €m
Non-current assets			
Financial non-current assets	1	**3,400**	**2,580**
Loans to group companies	1	**387**	**238**
		3,787	**2,818**
Current assets			
Receivables	2	**111**	**77**
Current tax assets	3	**4**	**2**
Cash and short-term deposits	4	**243**	**88**
		358	**167**
TOTAL ASSETS		**4,145**	**2,985**
Current liabilities			
Borrowings	5	**(789)**	**(384)**
Other payables	6	**(41)**	**(51)**
Provisions	7	**(2)**	**(2)**
		(832)	**(437)**
TOTAL LIABILITIES		**(832)**	**(437)**
NET ASSETS		**3,313**	**2,548**
Equity			
Called-up share capital	8	**388**	**388**
Share premium account	8	**17**	**17**
Legal Reserves	8	**51**	**32**
Other Reserves	8	**2,127**	**2,250**
Result for the year	8	**730**	**(139)**
Total Equity		**3,313**	**2,548**

Company 2022 accounts

Introduction

The accounts of the parent company included in this section are prepared in accordance with Part 9 of Book 2 of DCC.

The company financial statements have been prepared in accordance with Part 9, Book 2 of the Netherlands Civil Code. The Company makes use of the provisions of section 362.8 of Book 2 of the Netherlands Civil Code, and prepared its financial statements using the accounting principles for the recognition and measurement of assets and liabilities and determination of results, as applied in the consolidated financial statements.

Accounting for investments

Investments in group companies are accounted for using the equity method. Goodwill paid upon the acquisition of investments in group companies is included in the net equity value of the investment and is not separately shown on the face of the balance sheet.

The long-term loans to group companies also include loans, which although formally in the short-term category, are of a long-term economic nature. The list of group companies is presented in Note 33 of the consolidated accounts.

Presentation of Company accounts and accounting policies

The company statement of income has been prepared in accordance with Art. 2:402 DCC, which allows a simplified Statement of income in the Company financial statements in the event that a comprehensive Statement of income is included in the consolidated Group financial statements.

Information on the use of financial instruments is provided in Note 21 of the consolidated report and accounts.

Notes to the company accounts

1. Financial non-current assets

	Investments in group companies €m	Loans to own group companies €m	**Total €m**
Balance sheet value at 1 April 2021	2,580	238	**2,818**
Movements in 2021/22:			
Profit subsidiaries	733	-	**733**
Other comprehensive income	35	-	**35**
Additions	52	148	**200**
Reclassification	-	7	**7**
Loan redemptions	-	(6)	**(6)**
At 31 March 2022	3,400	387	**3,787**

Investment additions during FY22 include a capital injection in Tata Steel France Holdings SAS of € 52m.

2. Receivables

	2022 €m	2021 €m
Receivables from subsidiaries	**8**	8
Derivative financial instruments	**27**	34
Other debtors	**1**	3
Receivable from other Tata Steel companies	**75**	32
	111	77

Derivative financial instruments comprise forward foreign currency contracts and emission rights contracts.

The Company has received from TS Global Holdings Pte Ltd guarantees of €69m for loans it holds to other Tata Steel companies.

3. Current tax assets

	2022 €m	2021 €m
Dutch corporation tax assets	**4**	2
	4	2

4. Cash and short-term deposits

	2022 €m	2021 €m
Cash at bank and in hand	**243**	88
	243	88

The cash balances disclosed above and in the statement of cash flows are not subject to regulatory restrictions and are therefore available for general use.

5. Borrowings

	2022 €m	2021 €m
Borrowings		
Borrowings from subsidiaries	**781**	325
Borrowings from other Tata Steel companies	**8**	23
Bank and other loans	**-**	36
	789	384

The borrowings from TSN group companies bear interest rates based on EURIBOR or official local rates. These rates are fixed for periods up to six months.

6. Other payables

	2022	2021
	€m	€m
Amounts owed to subsidiaries	**5**	3
Derivative financial instruments	**26**	38
Other payables	**10**	10
	41	51

Derivative financial instruments comprise forward foreign currency contracts and emission rights contracts.

7. Provisions

	2022	2021
	€m	€m
Environmental Provision	**2**	2
Total Provisions	**2**	2

The environmental provision relates to clean up costs of the Demka wharf.

8. Capital and reserves

	Called-up share capital	Share premium account	Legal reserve	Retained earnings	**Total**
	€m	€m	€m	€m	**€m**
Balance as at 1 April 2020	388	17	10	2,247	2,662
Loss after taxation	-	-	-	(139)	(139)
Actuarial losses	-	-	-	3	3
Translation reserve	-	-	(2)	-	(2)
Hedging reserve	-	-	24	-	24
Balance as at 31 March 2021	388	17	32	2,111	2,548
Profit after taxation	-	-	-	730	730
Actuarial gains	-	-	-	16	16
Translation reserve	-	-	4	-	4
Hedging reserve	-	-	15	-	15
Balance as at 31 March 2022	388	17	51	2,857	3,313

The authorised share capital of the Company at 31 March 2022 amounts to €1,300,000,000 (31 March 2021: €1,300,000,000) and consists of 130,000,000 Ordinary shares of €10.00 each of which 38,760,710 Ordinary shares were issued and fully paid up. All the outstanding Ordinary shares were held by TSNH.

Legal reserves include the cash flow hedge reserve of €35m (2021: €20m) and the translation reserve of €16m (2021: €12m).

9. Contingent liabilities

	2022	2021
	€m	€m
Guarantees and securities on behalf of group companies	**107**	114

Tata Steel Nederland BV has provided a declaration of liability, as referred to in Article 403, Book 2, of the Dutch Civil Code, for the debts of its subsidiaries Tata Steel Nederland Technology BV and Tata Steel Nederland Services BV.

Since 1 January 2008 Tata Steel Nederland BV and most of its Dutch subsidiaries are part of the fiscal entity “Tata Steel Netherlands Holdings BV”, which is the ultimate parent within the fiscal entity. Under the Dutch Collection of State Taxes Act, the company and its fellow fiscal unity members are jointly and severally liable for any taxes payable by the group.

The Company has provided letters of support to Tata Steel Germany GmbH and Degels GmbH to enable these companies to continue their operations until the approbation by the shareholder of the financial statements for the year ending 31 March 2023, and for Tata Steel Germany GmbH for the year ending 31 March 2024.

10. Audit fees

2022	PricewaterhouseCoopers Accountants N.V. €m	Other PwC network €m	**Total PwC Network €m**
Audit of the financial statements	0.9	0.5	**1.4**
Other audit procedures	0.2	-	**0.2**
Tax services and other non-audit services	-	-	**-**
Total audit fees	1.1	0.5	**1.6**

2021	PricewaterhouseCoopers Accountants N.V. €m	Other PwC network €m	**Total PwC Network €m**
Audit of the financial statements	0.9	0.5	**1.4**
Other audit procedures	0.2	-	**0.2**
Tax services and other non-audit services	-	-	**-**
Total audit fees	1.1	0.5	**1.6**

The fees listed above relate to the procedures applied to the company and its consolidated group entities by accounting firms and external auditors as referred to in article 1(1) of the Dutch Accounting Firms Oversight Act (Dutch acronym: Wta) as well as by Dutch and foreign-based accounting firms, including their tax services and advisory groups.

These fees relate to the audit of the 2021/22 financial statements, regardless of whether the work was performed during the financial year.

Other audit procedures relate to the quarterly review procedures performed for Tata Steel IJmuiden B.V.

11. Other

No employees are employed by the Company, unchanged from the previous reporting period.

Further notes to and signing of the annual accounts

Group and affiliated companies and other capital interests
A list forming part of the Annual Accounts with names and other particulars of companies in which Tata Steel Nederland BV directly or via group companies participates or holds capital interests in other ways has been filed with the Trade Register in Amsterdam.

Remuneration of and loans to members of the Board of Management and of the Supervisory Board

	2022 €k	2021 €k
The total employment costs of the Board of Management of Tata Steel Nederland BV were:		
Short term employee benefits	**1,054**	870
Long term employment benefits	**740**	-
Post-employment benefits	**159**	155
Termination benefits	**-**	1,954
Total emoluments of current and former members	**1,953**	2,979

In the prior year the termination benefits had been agreed by the shareholder of TSN and exclude an accrual of €642k for estimated additional wage tax payable by the Company in accordance with Dutch tax laws.

Employment costs relate to all activities within the Group of the members of the Board of Management.

There were no loans outstanding to members of the Board of Management as at 31 March 2022 or 31 March 2021.

The Annual General Meeting of Shareholders determines the remuneration of the members of the Supervisory Board. This was last done in 2021.

	2022 €k	2021 €k
Remuneration of current and former members of the Supervisory Board*	**162**	186

* Borne by the Company and its subsidiaries

The members of the Supervisory Board do not own any securities in the Company's capital or rights thereto.

Appropriation of the result for the financial year 2022
We propose to add the profit of €730m over the financial year 2022 to the Retained Earnings.

During the year ended 31 March 2022 no dividend was paid.

Signing of the Annual Accounts
The 2022 Annual Accounts of Tata Steel Nederland BV have been signed by all the members of the Board of Management and by all the members of the Supervisory Board.

IJmuiden, 30 June 2022

Board of Management

J. van den Berg, Chair
J.E. van Dort
T. Eussen

Supervisory Board

T.V. Narendran, Chair
M.J.L. Jonkhart
L.M.T. Boeren
H. Adam

E. Other Information

Independent Auditor's Report
Reference is made to the Independent Auditor's Report as included hereinafter.

Appropriation of result according to Articles of Association
Article 36, of the Articles of Association stipulates that, the profit for the year is at the disposal of the General Meeting of Shareholders.