TRAFIGURA

2021 ANNUAL REPORT

TRAFIGURA GROUP PTE. LTD.

Financial and business highlights[1]

Group revenue
$231.3bn
$147.0bn in 2020
$171.5bn in 2019

Underlying EBITDA
$6.9bn
$6.1bn in 2020
$2.0bn in 2019

Underlying EBITDA margin
2.97%
4.13% in 2020
1.18% in 2019

Net profit
$3.1bn
$1.6bn in 2020
$0.9bn in 2019

Energy segment revenue as a percentage of Group revenue[2]
61%
57% in 2020
65% in 2019

Oil and Petroleum Products total volume traded[3]
330.3mmt
269.8mmt in 2020
274.9mmt in 2019

Total assets
$90.1bn
$57.0bn in 2020
$54.2bn in 2019

Total non-current assets
$15.0bn
$11.1bn in 2020
$10.8bn in 2019

Metals and Minerals revenue as a percentage of Group revenue
39%
43% in 2020
35% in 2019

Non-ferrous concentrates and refined metals total volume traded
22.8mmt
20.9mmt in 2020
19.9mmt in 2019

Average number of employees over the year[4]
9,031
8,619 in 2020
5,106 in 2019

Total Group equity
$10.6bn
$7.8bn in 2020
$6.8bn in 2019

Bulk minerals total volume traded
82.7mmt
76.7mmt in 2020
77.3mmt in 2019

Trafigura Group Pte. Ltd. and the companies which it directly or indirectly owns investments in are separate and distinct entities.
In this publication, the collective expressions 'Trafigura', 'Trafigura Group', 'the Company' and 'the Group' may be used for convenience where reference is made in general to those companies. Likewise, the words 'we', 'us', 'our' and 'ourselves' are used in some places to refer to the companies of the Trafigura Group in general. These expressions are also used where no useful purpose is served by identifying any particular company or companies.

1. Trafigura's financial year ran from 1 October 2020 to 30 September 2021.
2. The Energy segment incorporates our Oil and Petroleum Products and Power and Renewables divisions.
3. Million metric tonnes.
4. Total employee numbers are calculated as an average over the financial year and comprise employees of consolidated Trafigura Group businesses, operations and offices. MATSA, Porto Sudeste and Impala joint venture employees are excluded as these assets are not consolidated in the Trafigura Group financial accounts. Puma Energy was consolidated in Trafigura's balance sheet from 30 September 2021. As at 30 September 2021, the current total number of Group employees was 13,268 (9,037 Trafigura and 4,231 Puma Energy).

Contents

At a glance

Founded in 1993, Trafigura is one of the largest physical commodities trading and logistics groups in the world. Our core business is supported by a number of assets, investments and alliances to complement and enhance these activities. In 2021, the Group employed over 9,000 people across 48 countries.

Business activities[1]

Oil and Petroleum Products

330.3mmt

Total volume traded

Metals and Minerals

105.5mmt

Total volume traded

Power and Renewables

1.7GW

Renewable energy secured

Shipping and Chartering

4,834

Fixtures

Assets and investments

TRAFIGURA

Trafigura Group owns and operates a number of mining assets, terminals and vessels that complement its core business activities.

impala

Impala Terminals is a multimodal logistics provider focused on export-driven emerging markets. It owns and operates ports, port terminals, warehouses and transport assets.

GALENA asset management

Galena Asset Management provides investors with specialised alternative investment solutions through its investments in real assets and private equity funds.

nyrstar

Nyrstar is a global multi-metals mining and smelting business, with a market-leading position in zinc and lead.

PUMA ENERGY

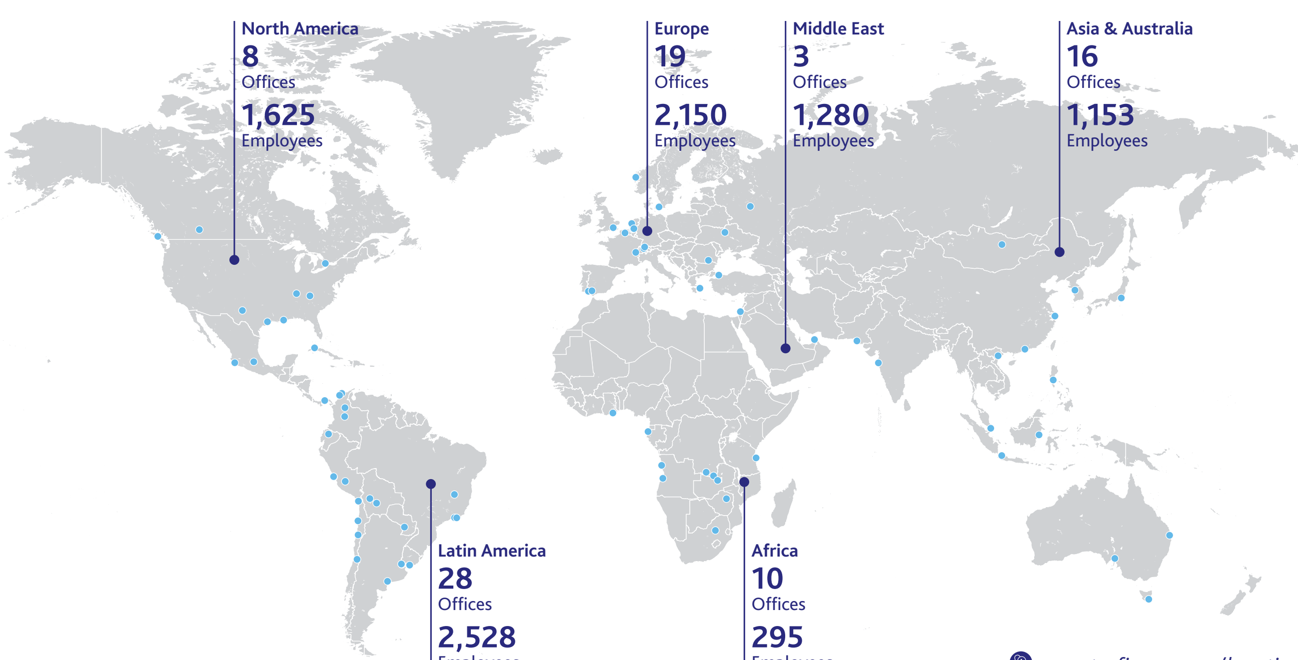
A global oil and petroleum products company, with a network of bulk storage terminals, airports and service stations.

TFG marine

A joint venture owned by, Trafigura, Frontline and Golden Ocean, TFG Marine provides competitively priced, premium marine fuels at key hubs along the world's major shipping routes.

nala renewables

Nala Renewables is a 50:50 joint venture between Trafigura and IFM investors that invests in on-shore wind, solar and power storage projects.

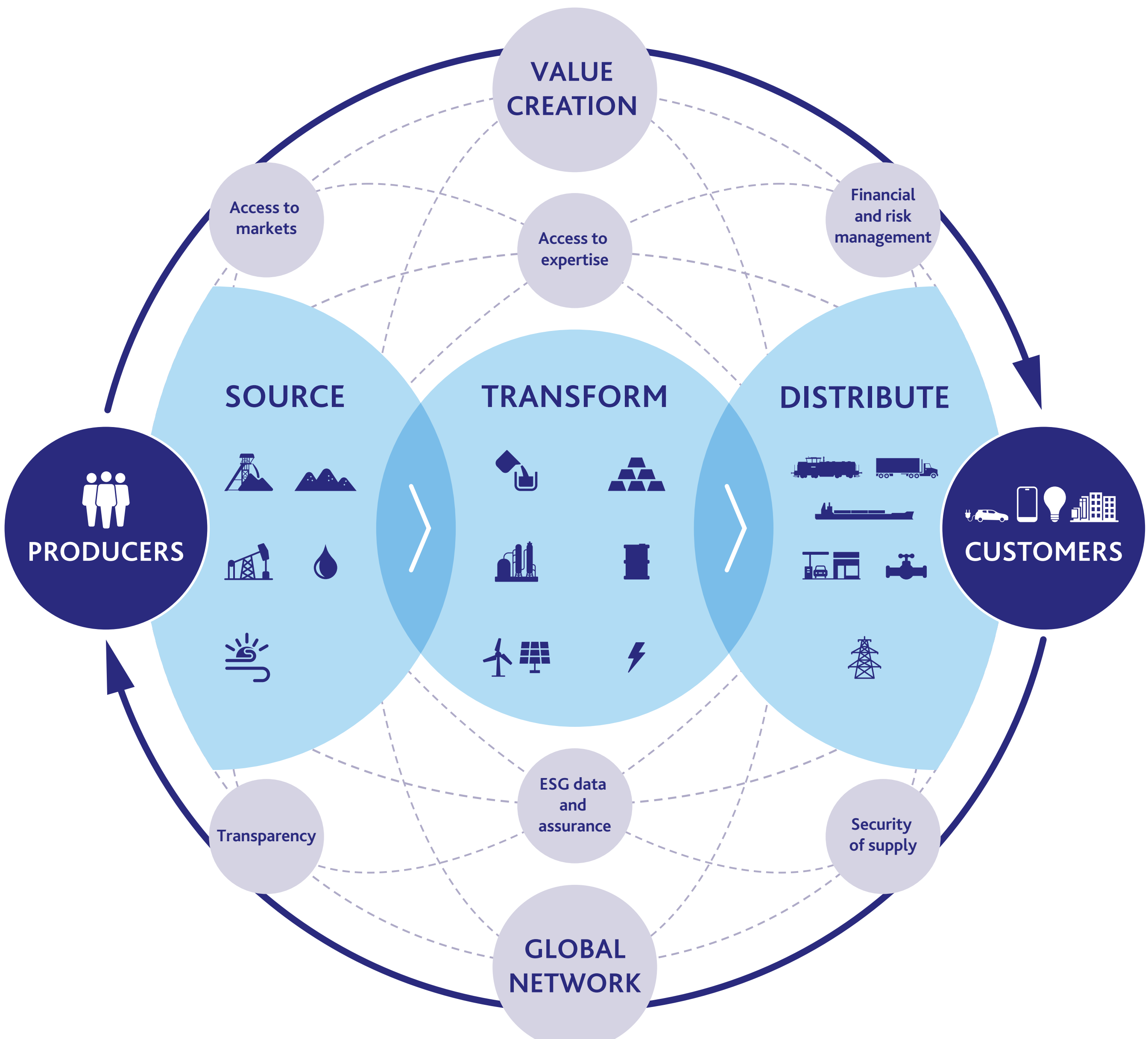


1. FY2021 performance figures.

www.trafigura.com/locations

What we do

At the heart of global supply, Trafigura connects the world with the vital resources it needs. Through our Oil and Petroleum Products, Metals and Minerals, and Power and Renewables divisions, we deploy infrastructure, skills and a global network to move commodities from where they are plentiful to where they are needed most, forming strong relationships that make supply chains more efficient, secure and sustainable.



www.trafigura.com/about-us/what-we-do/

Statement from the Executive Chairman and Chief Executive Officer

Another year of record performance, further business diversification and a growing customer base

Jeremy Weir
Executive Chairman and Chief Executive Officer

Trafigura's performance in 2021 again set new records in terms of volumes handled and overall profitability. We also made excellent progress over the course of the year in further diversifying our business to play a meaningful role in the ongoing energy transition.

It was a year that saw the global economy recovering from the shock of COVID-19, albeit unevenly in different regions, and one in which underlying fragilities in global supply chains were laid bare as demand rebounded whilst logistics and supply struggled to keep pace. This environment once again demanded exceptional levels of customer service, risk and supply chain management from our teams, to provide security of supply to our customers despite ongoing disruptions and supply-demand imbalances.

Profit, turnover and volumes handled across our trading divisions for the year were the highest in our history, consolidating the strong performance in FY2020 and demonstrating a structural rebasing of the quality and consistency of the company's financial performance and service to suppliers and customers.

Our core Oil and Petroleum Products and Metals and Minerals business divisions continued to fire on all cylinders, while our recently established Power and Renewables division recorded a strong inaugural result. A number of factors contributed to our trading success, but above all, the scale and resilience of our business benefitted from a flight to quality, both in terms of customer relationships and financial liquidity.

Trafigura's service-oriented approach, global logistical strength and reliability as a supplier helped to forge relationships with many counterparts and customers during the first phases of the pandemic. These relationships have continued to strengthen in recent months as demand ramps up and presents additional complexities.

The Group's trading desks once again capably managed extreme market volatility across a broad spectrum of commodities and performed exceptionally well regardless of market conditions. Fundamental to this performance were our strong risk controls, including conservative value at risk of less than one percent of Group equity, and the depth of our market knowledge and expertise, incorporating the increased use of data analytics.

For our operational assets, however, this was another challenging year as staff levels, supply chains for critical inputs and logistics all continued to experience high levels of disruption due to COVID-19 related operational issues. Safety performance was also negatively impacted and I am saddened to report that three employees and three contractors lost their lives at work during the year, including four fatal incidents at mining operations. This simply is not good enough and safety improvement plans are being implemented across our operations to align performance with the very high safety standards to which we aspire.

The Nyrstar smelting business continued to make progress with a restorative capital investment programme, but faced COVID-19 related operational issues and was squeezed by high energy prices towards the end of the year. Our portfolio of fixed assets underwent significant change during the year. We are proud to have created a world-class copper mining complex through our investments over more than 15 years at the MATSA mining venture in Spain. In September, we announced the sale of Trafigura's stake in the operation to Sandfire Resources subject to receipt of regulatory approvals. We also recapitalised and consolidated Puma Energy into the Group. Together with new management and a revised strategic focus, Puma Energy is now on a firmer financial footing from which to build its business in key markets.

Higher metals prices contributed to an improved financial performance from our mining assets. However, raising sufficient liquidity to operate with commodity prices at elevated levels is clearly a challenge for the sector. Our commitment to transparency, responsibility and robust governance and the strength of our global network and customer relationships again enabled Trafigura to secure the capital to support revenues of over USD230 billion, working with over 140 banks. Our strong profit has also further strengthened our balance sheet, with retained earnings taking Group equity above USD10 billion for the first time.

We progressed with a number of new ventures. The Nala Renewables joint venture with IFM Investors appointed a CEO, built out its management team and launched its first projects, including an investment in Swift Current Energy – a developer of solar and wind power energy projects in North America. We made a major investment in H2 Energy, a pioneer in creating green hydrogen ecosystems for fuel-cell trucks, establishing a joint venture that is developing plans to expand into other European countries in the near future. We continued to invest in new technologies, including mobility, energy storage and carbon abatement. These investments are strategically important as they help us understand the changing dynamics and new opportunities that will reshape the industries we supply over the coming years.

We also invested to facilitate new sources of supply of the critical metals that are required for many aspects of the energy transition. In nickel, a key component of lithium-ion batteries for electric vehicles, we supported the construction of a nickel sulphate plant at the Terrafame mine in Finland. Our investment in the Prony Resources nickel and cobalt mine in New Caledonia helped to secure the sustainable future of the operation, by acquiring a minority stake and helping to secure long-term financing, technical and customer support, in collaboration with local stakeholders and the French government. In addition, we stepped up our pioneering efforts to develop responsible sourcing of cobalt in the Democratic Republic of the Congo, through our agreements with the state-owned entity established for this purpose, Enterprise Générale du Cobalt, and international NGO Pact.

We recognised the need for continued investment in low-cost and relatively low-carbon intensity sources of oil and gas. This is in line with our expectation that these sources of energy will continue to be required for some years to come, to bridge the world's growing energy needs while the energy transition to low- and zero-carbon fuels takes place. This included acquiring a 10 percent minority interest in Vostok Oil. Vostok Oil is developing oil and gas resources using methods that are expected to reduce the carbon intensity of its production to approximately 25 percent of the global average for new oil projects, based on current estimates.

Finally, we are continuing to strengthen our approach to environmental, social and governance (ESG) risks and opportunities across our operations and value chains. During 2021, we enhanced our governance structure by establishing a dedicated ESG Committee of the Board, which I chair. The committee provides direction for the Group's ESG policy, strategy and performance and will ensure a consistent approach to risk management across the organisation.

Our commitments to reduce Scope 1 and 2 greenhouse gas emissions by 30 percent by 2023[1], independently verify the alignment of our leading responsible sourcing programme with international sustainable procurement standard ISO20400, and invest in a pipeline of renewable power generation projects enabled us to secure our first sustainability-linked financing. Announced in March 2021, 34 financial institutions participated in a USD5.5 billion European revolving credit facility which rewards the Group with discounted financing costs if sustainability targets are achieved. Progress in setting a Scope 3 emissions reduction target by 2023 has moved ahead of schedule, enabling us to set a new target to reduce total shipping emissions intensity by 25 percent by 2030, compared to the adjusted 2019 IMO industry baseline[2]. This new target encompasses over 83 percent of Trafigura's reported Scope 3 emissions in 2020[3] and will see the emissions intensity profile of our owned and third-party leased shipping fleet decline by 48 percent compared to the 2008 IMO industry baseline. This compares favourably to the IMO industry target of a 40 percent emissions intensity reduction over the same timeframe.

As one of the world's largest charterers of tankers, gas and bulk carrier vessels, we continued our high level of engagement in the global debate and efforts to decarbonise shipping, including as a leading member of the "Getting to Zero" coalition and key proponent of its Call to Action, signed by over 200 companies. As a founding member of the First Movers Coalition, an initiative announced by President Biden at COP26 and led by Presidential Special Envoy for Climate John Kerry and the World Economic Forum, Trafigura has also committed to convert six vessels, 18 percent of our current owned fleet, to use zero-emissions fuels by 2030.

These activities form a broad and solid platform not only for strong profitability today but also for responsible future growth aligned with the needs of a rapidly changing world. I would like to thank all of our customers and suppliers for their ongoing co-operation, our financial stakeholders for enabling our continued growth and our employees for their hard work and commitment. We expect 2022 to be at least as challenging as 2021, and I believe our company is well positioned to deliver vital commodities and exceptional customer services to an even larger customer base in the months ahead.

[1] GHG reduction target set against our 2020 baseline.

[2] The IMO 2019 normalised benchmark is an indication of the global fleet carbon intensity based on the 2019 IMO DCS data and is used as a benchmark to assess the progress of the industry towards meeting the 2030 IMO decarbonisation goals.

[3] Excluding GHG emissions from our investments. Including investments this figure is 70 percent.

Financial review

Growing customer business and financial liquidity lead to record profit

The 2021 financial year was the best in Trafigura Group's 28-year history in terms of trading volumes and profit, continuing the strong performance registered in 2020.

Christophe Salmon
Group Chief Financial Officer

Group revenue

$231.3bn

2021 231.3
2020 147.0

Total assets

$90.1bn

2021 90.1
2020 57.0

Underlying EBITDA[1]

$6.9bn

2021 6.9
2020 6.1

Non-current assets

$15.0bn

2021 15.0
2020 11.1

Net profit

$3.1bn

2021 3.1
2020 1.6

Group equity

$10.6bn

2021 10.6
2020 7.8

Underlying EBITDA margin

2.97%

2021 2.97%
2020 4.13%

Adjusted debt to Group equity

(0.21)x

2021 (0.21)x
2020 0.35x

In 2021, revenues increased by 57 percent to USD231,308 million, reflecting higher commodity prices and increased trading volumes as we continued to grow our customer base and expand into new markets. Underlying EBITDA rose 13 percent to USD6,867 million from USD6,072 million in 2020[1]. Net profit of USD3,075 million was nearly double the prior year's result, despite including a one-off, non-cash accounting adjustment which reduced net profit by USD716 million due to IFRS rules on the treatment of a foreign currency translation reserve following the consolidation of Puma Energy.

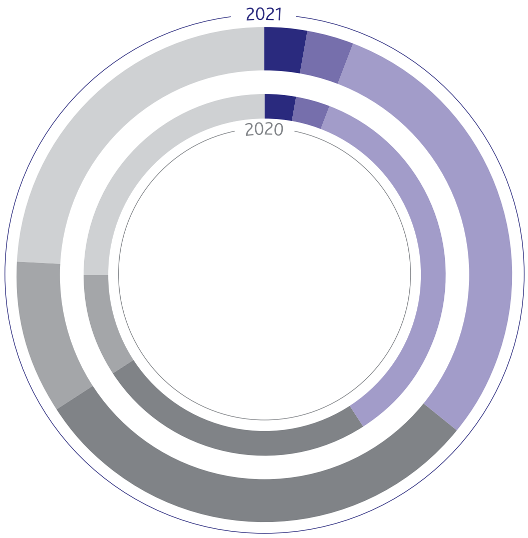
In 2021, Trafigura traded an average of seven million barrels of oil and petroleum products per day, a significant 25 percent increase over the prior year. Non-ferrous metals traded volumes grew by nine percent to 22.8 million metric tonnes and bulk minerals by eight percent to a total of 82.7 million metric tonnes.

A flight to quality by the banking sector enabled Trafigura to increase its credit facilities to cope with increased working capital needs due to greater traded volumes and a higher commodity price environment, in particular in the second half of the year. The balance-sheet grew by 58 percent during the year to USD90,066 million as at 30 September 2021.

Gross indebtedness increased by 38 percent, driven by the financing needs of our increased inventories and trade receivables; however, our net leverage – as measured by the adjusted debt to Group equity ratio – remained close to zero. This predominantly reflected continued strong cash generation and improved working capital. Thanks to the strong profitability of the year and our measured dividend pay-out policy, Group equity rose by 36 percent to USD10,560 million, the first time that the Group's equity value has surpassed USD10 billion. This shows once again the strength and resilience of our financing model in enabling business growth, supported by transparent financial communication and our active environmental, social and governance (ESG) programme.

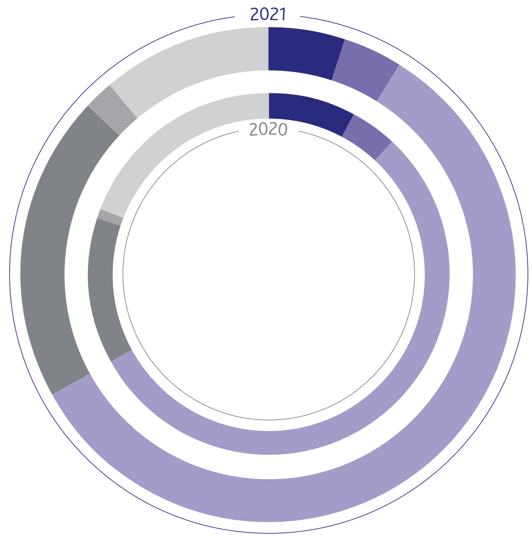
[1] The Group has changed its income statement presentation from a classification based on the function of expense to a classification based on the nature of expense. This change provides readers of our financial statements with a more transparent and clearer analysis of the financial performance. Also, it prepares the Group for anticipated future IFRS developments. In addition, the Group replaced the gross profit metric with two new financial performance metrics: operating profit before depreciation and amortisation, and underlying EBITDA.

Energy* Revenue by geography (%)



	2021	2020
Middle East	3%	3%
Africa	3%	3%
Asia & Australia	30%	35%
Europe	30%	25%
Latin America	10%	9%
North America	24%	25%

Metals and Minerals Revenue by geography (%)



	2021	2020
Middle East	5%	8%
Africa	4%	4%
Asia & Australia	58%	55%
Europe	20%	13%
Latin America	2%	1%
North America	11%	19%

* The Energy segment includes Oil and Petroleum Products and Power and Renewables divisions.

Other highlights of the year included:

- A strong start for our new Power and Renewables division, which generated underlying EBITDA of USD80 million during the year. This was an excellent result for the new division which was established in 2020 and represents an important strategic diversification of our portfolio to participate in and benefit from the energy transition;
- Sale of our stake in the MATSA polymetallic mining operation in Spain, announced in September 2021, realising a pre-tax gain of USD381 million in the current financial year;
- Successful recapitalisation of Puma Energy and its consolidation into the Trafigura Group. Together with the appointment of new management, this has put Puma Energy on a firmer financial footing and will enable closer alignment between its downstream activities and Trafigura's oil trading business;
- Continuation of our prudent and disciplined approach to fixed assets, with a number of impairments recorded to reflect challenging operational performance; and
- New investments in resources that will be needed during the energy transition, including an interest in Vostok Oil, a low-cost, low carbon intensity oil and gas resource in Russia, and in nickel and cobalt producer, Prony Resources, in New Caledonia.

Income

Net profit for the year was USD3,075 million, 92 percent higher than USD1,599 million in FY2020. Underlying EBITDA rose to USD6,867 million (FY2020: USD6,072 million), reflecting increased profitability across the Group's divisions. Our Energy segment, which includes our Oil and Petroleum Products and Power and Renewables divisions, contributed USD4,372 million (FY2020: USD4,760 million) to total underlying EBITDA or 64 percent. Metals and Minerals contributed USD2,494 million (FY2020: USD1,310 million), or 36 percent of the total. Operating profit before depreciation and amortisation was USD6,762 million, 14 percent higher than in FY2020.

Net financing costs rose to USD718 million from USD662 million as a result of increased trading activity balanced by lower interest rates from March 2020 as a result of the pandemic. Income tax was USD368 million, compared to USD292 million in FY2020.

Impairments remained substantial, including those to our industrial assets Puma Energy and Nyrstar, and contributed a loss of USD709 million compared to a loss of USD1,568 million in FY2020. The largest adjustments related to Nyrstar's Australian smelting operations and the Corpus Christi right-of-use asset in the US.

Balance sheet

Total assets were USD90,066 million as at 30 September 2021, compared to USD56,986 million a year earlier, principally reflecting increases in inventories, trade receivables and cash. Of the total, current assets rose to USD72,516 million from USD45,867 million, including a rise in inventories to USD29,654 million from USD20,178 million. Trade and other receivables increased to USD24,748 million from USD15,245 million and cash balances rose to USD10,678 million from USD5,757 million. Non-current assets also rose to USD15,014 million from USD11,116 million, mainly driven by Puma Energy's consolidation and other investments including our acquisition of a 10 percent interest in Vostok Oil.

Cash flow

The powerful trading performance continued to generate strong cash flows, with operating cash flow before working capital changes of USD6,862 million, a further increase on the already very strong result in 2020 of USD6,122 million. Trafigura believes operating cash flow is the most reliable measure of its financial performance, since the level of working capital is predominantly driven by prevailing commodity prices and is financed under the Group's self-liquidating financing lines. Net cash used in operating activities was lower compared to last year at USD233 million from USD658 million, once again reflecting the company's strong organic cash flow generation.

Investing activities resulted in a net cash use of USD2,728 million, compared to an outflow of USD265 million in FY2020, partly driven by the Vostok Oil investment. The net cash from financing activities was a net inflow of USD7,882 million, compared to an inflow of USD413 million in FY2020, reflecting wide access to self-liquidating short-term finance lines that match the increased working capital needs. The overall balance of cash and cash equivalents as at 30 September 2021 was USD10,678 million, compared to USD5,757 million a year earlier

Liquidity and financing

To support the increased levels of activity across the Group in a higher commodity price environment, Trafigura successfully secured an additional USD6 billion of bank financing in FY2021, bringing total credit lines to an unprecedented USD66 billion, provided by some 140 banks globally, excluding Puma Energy.

The majority of our day-to-day trading activity is financed through uncommitted, self-liquidating trade finance facilities, while we use corporate credit facilities to finance other short-term liquidity requirements, such as margin calls or bridge financing. This funding model gives us the necessary flexibility to cope with periods of enhanced price volatility as utilisation of the trade finance facilities increases or decreases to reflect the volumes traded and underlying prices. Trafigura also maintains an active debt capital markets presence to secure longer-term finance in support of our investments.

In October 2020, we announced the closure of our new Asian Syndicated Revolving Credit Facility at USD1.6 billion equivalent. The facility was oversubscribed and upsized from the initial launch amount of USD1.0 billion equivalent, with 24 banks participating in the transaction.

The Group has been very active in the public debt capital markets during the year with different currencies and formats, and benefitted from very strong support from institutional investors and private banks. In December 2020, the Group re-opened its USD400 million five-year maturity senior bond issued in September 2020 to raise an additional USD100 million. In January 2021, the Group successfully issued a EUR400 million senior bond with a five-year maturity at a price of 3.875 percent. The oversubscription of approximately two times after pricing revision enabled the company to upsize the transaction whilst significantly tightening pricing. This bond was re-opened in March 2021 to reach EUR450 million at the end of the 2021 reporting period, and subsequently completed another tap in October 2021 to reach a total size of EUR500 million. These issuances and re-openings of senior bonds have enabled the Group to strengthen its balance sheet with long-term debt issued at competitive yields.

In February 2021, the Group entered the Schuldschein loan market with an inaugural EUR110 million loan, split between three- and five-year maturities. Likewise, this issuance received strong investor demand and as a result was increased from an initial EUR75 million launch amount.

In March 2021, the Group announced the closing of its new 365-day European multi-currency syndicated revolving credit facility (ERCF) totaling USD1.85 billion, as well as the extension and increase of its USD3.65 billion three-year facility. The facilities included our first sustainability linked loan structure, incorporating KPIs designed to incentivise the Company to meet ambitious targets related to the reduction of greenhouse gas emissions, the further alignment of Trafigura's responsible sourcing programme with international standards for sustainable procurement, and the development of a renewable power portfolio. The ERCF was initially launched at USD1.5 billion and closed substantially oversubscribed.

In April 2021, Trafigura closed a USD204 million US Private Placement across five-, seven- and ten-year tenors. The transaction was Trafigura's sixth in this market and was timed to refinance a USD98 million US Private Placement maturity and also raised over USD100 million of additional liquidity for the company. The transaction was upsized from an initial USD100 million following strong investor demand, with over half of the total amount raised in the 10-year tranche. The transaction was the largest sustainability-linked financing on record in the US Private Placement market at that time and incorporated the same KPIs as the ERCF.

In July 2021, Trafigura placed USD300 million of notes in the Asset-Backed Securities (ABS) Market. This was Trafigura's sixth public ABS transaction since the inception of the programme in November 2004. Trafigura Securitisation Finance (TSF) has since become the largest AAA/Aaa publicly-rated securitisation programme of trade receivables in the world. The successful pricing of the notes demonstrated not only the attractiveness of trade receivables as an underlying asset class which is rarely offered in public markets, but also the quality of the structure. Investors were mindful of the strong performance of the programme during the COVID-19 pandemic, proving once again its resilience.

In September 2021, Trafigura raised a USD400 million Perpetual Subordinated Bond at a price of 5.875 percent, the tightest price achieved by Trafigura for a perpetual bond. The bond was structured as a non-call six-year subordinated bond and the issuance set the longest tenure attained by the Group in the public debt capital markets. The proceeds were used to partially repay the Group's outstanding USD800 million Perpetual Bond issued in 2017, following a tender offer that was launched at the same time. The Bond benefits from an equity treatment under the IFRS accounting standard.

After the financial year-end, in October 2021, Trafigura refinanced its Asian Revolving Credit Facility (RCF) and Term Loan Facilities (TLF) at USD2.4 billion equivalent, with 36 banks participating in the transaction, including eight new lenders. The new facilities comprised of a 365-day USD RCF (USD700 million), a one-year CNH TLF (c. USD890 million equivalent) and a three-year USD TLF (USD810 million). In line with the ERCF from March 2021, Trafigura implemented a sustainability-linked loan structure in those new facilities.

One additional financial task that faced us during the year was that of preparing for the LIBOR transition ahead of the replacement of this long-standing market benchmark with the new Secured Overnight Financing Rate (SOFR). Given the scale of our financing needs and the sheer number of our banking relationships, this was a complex exercise, but we engaged in it proactively and are now well positioned to trade with all of our banks on the basis of the new benchmark.

Key financing milestones in FY2021:

Oct. 20	Asian RCF Refinancing	USD1.6 billion
Feb. 21	Schuldschein	EUR110 million
Mar. 21	European RCF Refinancing	USD5.5 billion
Apr. 21	US Private Placement	USD204 million
Jul. 21	Receivables Securitisation (ABS Notes)	USD300 million
Sept. 21	Perpetual Subordinated Bond	USD400 million

Public ratings

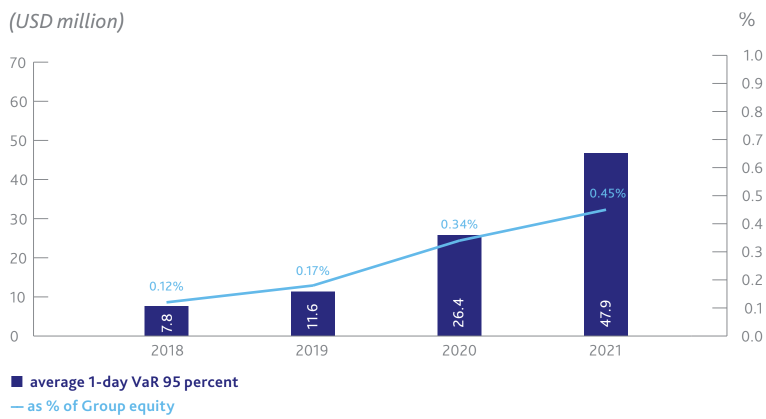
Trafigura does not hold a corporate public credit rating and does not seek to obtain one. There are a number of reasons for this, including the fact that Trafigura's strategy has always been to obtain funding from stakeholders that understand its business model, rather than making investment decisions on the basis of a credit rating. In addition, holding a credit rating could cause Trafigura to take more short-term focused decisions in order to maintain a particular credit rating level. This would conflict with the Group's focus on long-term value creation and maintenance of a strong balance sheet. Trafigura has been highly successful in securing funding without a public credit rating. Financial discipline is inherent to the company's business and finance model due to its reliance on debt markets for capital and liquidity.

Trafigura's significant expansion of its sources of financing over the years has been achieved on the basis of the Group maintaining an acceptable and sustainable credit standing, consistent with an investment grade profile. The Group's financial discipline is reinforced by the financial covenants provided to unsecured lenders in the bank market and is underlined by the strong support we receive from our banking group and investors.

Value at risk

The Value at Risk (VaR) metric is one of the various risk management tools that Trafigura uses to monitor and limit its market risk exposure.

Trafigura uses an integrated VaR model which captures risk, including commodity prices, interest rates, equity prices and currency rates (see further details in Note 40). During 2021, the average 95 percent one-day VaR for derivative positions was USD47.9 million (2020: USD26.4 million), which represented less than one percent of Group equity. This increase in our one-day VaR position reflects the larger size of our trading operations and volatility incurred during the reporting period.



Shareholder structure

Trafigura is owned by circa 1,000 of its employees, who are focused on the long-term success of the business, promoting management depth and stability, and encouraging prudent risk management. The decision as to which employees may become shareholders is discretionary based on individual performance, seniority and expected future contribution to the Group.

Trafigura has significantly built up its shareholders' equity since its inception in 1993 and the Group retains profits to further increase its capital base. Any discretionary buy-backs are subject to sufficient liquidity being available and to the company remaining compliant with its financial covenants.

Leverage and adjusted debt

As a physical trading group, Trafigura relies on a specific funding model. As a result, it is not appropriate to apply the same financial analysis framework as for typical industrial companies.

When analysing Trafigura's credit metrics, banks and investors have historically considered financial leverage after excluding some specific balance sheet items (e.g., inventories and non-recourse debt such as our securitisation programmes), resulting in the use of adjusted debt as an overall leverage metric. Adjusted debt corresponds to the company's total non-current and current debt less cash, fully-hedged readily marketable inventories (including purchased and pre-paid inventories which are being released), debt related to the Group's receivables securitisation programmes and the non-recourse portion of loans from third parties. This metric is a better measure of the Group's financial leverage than a simple gross debt metric.

In particular, the following adjustments are made:

- The receivables securitisation programmes are taken out on the basis that they are entirely distinct legal entities from Trafigura with no recourse to the Group and are only consolidated into the financial statements in accordance with the Group's accounting rules.
- Cash and short-term deposits are deducted from debt.
- Pre-sold or hedged stock, including purchased and pre-paid inventories which are being released, are deducted from debt. This reflects the great liquidity of the stock and the ease at which it could be converted to cash. As noted above, Trafigura's policy is to have 100 percent of stock hedged or pre-sold at all times.
- Non-recourse invoice discounting or specific portion of loans (for example, non-recourse portions of bank lines used to extend prepayments to counterparties) are deducted from debt.

As at 30 September 2021, the ratio of adjusted debt to Group equity stood at -0.21x (minus 0.21x), down from 0.35x at 30 September 2020. This reduction principally reflected the exceptionally strong retained earnings during the year, as well as cash generation and improvement of working capital, and despite the consolidation of the Puma Energy financial debts.

Whilst the ratio of adjusted debt to Group equity was particularly strong this year, our intention is to maintain this ratio to a level of 1x. Any upwards fluctuation of this ratio to 1x in the future should not be considered as a sign of Trafigura relaxing its disciplined effort to maintain a solid credit standing.

The Company's adjusted debt to equity ratio at the end of the reporting period is calculated as follows:

	2021 USD'M	2020 USD'M
Non-current loans and borrowings	**10,911.2**	7,070.1
Current loans and borrowings	**34,269.8**	25,783.5
Total debt	**45,181.0**	32,853.6
Adjustments		
Cash and cash equivalents	**10,677.5**	5,757.0
Deposits	**460.0**	466.0
Inventories (including purchased and pre-paid inventories)	**30,508.8**	20,921.8
Receivables securitisation debt	**5,150.6**	2,750.6
Non-recourse debt	**555.4**	198.4
Adjusted total debt	**(2,171.3)**	2,759.8
Group equity	**10,559.9**	7,789.9
Adjusted debt to Group equity ratio at the end of the year	**(0.21)**	0.35

Taxation

Trafigura operates in a multitude of jurisdictions and adheres to applicable local and international tax law, including legislation on transfer pricing, in the countries in which it operates. The Group's tax policy is to pay appropriate tax according to work carried out in each jurisdiction, as determined by a functional analysis of operations using standard measures wherever possible, underpinned by reports prepared to fulfill local transfer pricing requirements.

The Group's effective tax rate – the average rate at which consolidated pre-tax profits are taxed – varies from year to year according to circumstances, and in FY2021 it was 11 percent (or USD368 million) compared to 15 percent (or USD292 million) in FY2020. The change to the effective tax rate is a consequence of a change in the mix of taxable profits and losses generated in the various countries within which the Group operates.

Outlook

Trafigura Group results for 2020 and 2021 show a comprehensive reset of our customer base, profitability and financial strength, largely owing to the company's success in establishing itself as partner of choice to help clients navigate the turbulent markets created by the COVID-19 pandemic. While the worst economic effects of the virus may have receded and the global economy is now in a strong recovery mode, we expect the volatile conditions of the past two years to continue, not least because of the unpredictable dynamics of the climate transition. One of these dynamics is a persistent mismatch between growing demand for energy and industrial raw materials on the one hand, and supply constraints including due to chronic under-investment on the other. As a result, we expect the services that Trafigura provides in matching supply with demand efficiently and responsibly to continue to be in high demand, and the customer relationships established during these difficult years to continue to bear fruit. With our equity base reinforced and financial liquidity assured, the Group is well positioned for further growth.

Operational review

Organisation and infrastructure for growth

Mike Wainwright
Executive Director and
Chief Operating Officer

Over the last five years, Trafigura's equity value has grown rapidly, from USD5.5 billion in 2016 to over USD10 billion in 2021. This growth has been enabled by our disciplined approach to risk management, our entrepreneurial culture within a clear governance framework, our organisational structure and by the infrastructure and resources we have developed. In other words, without the right systems, processes and people, Trafigura could not have become the company it is today.

Indeed, the exceptional growth experienced in 2020 and 2021 has placed an ever-higher premium on continuously improving the way we manage all these elements to ensure reliable customer service, resilient risk management in volatile markets and maximum efficiency. Commodities trading is by definition a low-margin business, so operational precision and accuracy are existential requirements.

This section of the Annual Report aims to provide insight on these less visible foundations of our success and to explain how they are evolving to support the next phase of business growth and diversification. Although we are an employee-owned company, we aim to be transparent about these aspects of our business as well as our operational and financial performance.

Trafigura's core business is the physical trading of oil and petroleum products as well as non-ferrous concentrates and refined metals and bulk minerals, and their transportation across the globe. Newer activities include power and carbon trading and investment in renewable power generation, low-carbon hydrogen, ammonia and biofuels and battery storage.

These activities demand extensive, expert support teams to oversee financial risk management, manage physical operations and carry out administration. They also require sophisticated IT systems to manage data, implement internal controls and keep constant track of balance sheet assets and liabilities.One of the keys to our success in recent years has been managing all these functions in such a way that we could substantially grow revenues while maintaining a disciplined approach to our cost base.

People and organisation

In the 2021 financial year, Trafigura Group employed an average of 9,031 people in 84 offices in 48 countries. The equivalent figures five years ago were 3,935 employees and 62 offices in 35 countries.

The expansion of headcount reflects the rapid growth in trading volumes over the period and the Group's increasing diversification, which has called for the recruitment of new skill-sets such as data analytics and those required to trade power and carbon.

In turn, the increasing number of offices demonstrates that our business depends ever more on maintaining a physical presence close to where the commodities we buy and sell are produced and consumed. As a global business involved in logistics and supply chain management, we rely heavily on local insights, expertise and market insight.

We require the people providing those services to be extensively trained in the company's values and culture, including transparency and compliance, and to be directly accountable to Group management. Our Compliance department reports directly to the Compliance Committee of the Board. The department consists of 16 individuals covering all time zones and business needs, supported by constantly evolving systems, tools and training modules. Our employees undergo regular and compulsory compliance training, including anti-money-laundering and anti-bribery training.

A key strategy enabling disciplined and efficient global growth has been the establishment of a network of hub offices around the world that host commercial activities and a wide range of support functions.

First in Mumbai, then in Montevideo, and now also in Athens and Calgary, these hub offices are important centres for the company that mean support functions such as Operations, Deals Desk and Contract Administration – once carried out physically alongside trading in centres such as Geneva or Houston – can be increasingly performed remotely without compromising their quality or resilience.

The concentration of support functions under trusted senior managers in these centres has made them easily scalable, while enhancing specialised expertise. More than 800 people are now employed in the Mumbai office, and more than 500 in Montevideo. A new development in 2021, which will continue into 2022, was the accelerated build-out of the Athens office, which can now complement Mumbai in providing a wide range of additional support in the European time zone. Similarly, we expanded our presence in Calgary, to create a regional hub performing a similar role to Montevideo for North America. There are advantages in having multiple centres of this kind, including risk diversification and healthy competition and the ability to offer personnel relocation and career development opportunities.

The creation of an efficient and distributed global organisation along these lines, with standardised processes and high-quality IT infrastructure, also helped us to confront the major challenge of COVID-19 in 2020 and 2021. We moved quickly when the pandemic hit, shifting the vast majority of our workforce to home-working and providing employees with the hardware and communications infrastructure they needed. Even so, remote working is not easy in a complex and fast-moving business such as ours. Making it function effectively required intense collaboration and trust between commercial teams, operators, deals desk, finance, IT and all the support functions – underlining the quality of our systems and the adaptability of our people.

IT landscape

Over the last six years, Trafigura Group has spent an average of USD144 million per year in capital and operating expenditure on information technology. One of the key focuses of this activity has been the establishment of a proprietary, front-to-back entreprise resource planning (ERP) platform covering everything from trade capture to accounting for all our trading divisions, known as Titan. This major project has been underway for several years. It builds on our first generation proprietary platform, with the primary objective of consolidating multiple existing systems and moving to real-time reporting to support rapidly growing trading requirements. It has been progressively implemented across our Metals and Minerals division in recent years, and will be completed in the Oil and Petroleum Products division in 2022.

Titan is unique in our industry, contains considerable amounts of proprietary IP, and is already bringing benefits to the organisation in terms of efficiency, control, risk management and reliability. Once fully installed, it will provide a rich seam of data to support decisions on allocation of working capital between different trading books and generally enrich the risk management discussion across the organisation.

Various initiatives to improve these processes will be undertaken over the coming year, reflecting the importance of putting available financial liquidity to the best possible use at a time of high commodity prices and rising volumes.

Further benefits are likely to accrue from the ability to structure and analyse the vast amounts of internal data that Titan will generate. Our recently-established Data Science and Engineering team has already delivered a range of useful insights to assist trading decisions by structuring and analysing publicly available data on matters such as weather events.

Employee shareholder model

A discussion of Trafigura's operations would not be complete without comment on Trafigura's corporate culture and the ownership model that underpins it. Since the company's foundation in 1993, it has been owned by a growing number of employees, for whom equity is an important element of remuneration. This year that growth accelerated in tandem with our recruitment activity, taking the number of shareholders to circa 1,000, compared with 850 in 2020.

Again, this is a unique feature for a company in our industry. We see the increase in the number of shareholders as an unalloyed positive as it will further reinforce the advantages we have witnessed over the years – a long-term perspective in running the company; close alignment between management and employees; conservative risk management; and a highly collaborative approach to business development. As Trafigura moves further into new areas, such as power trading, with all the synergies with other trading activities that this promises, we expect this culture to continue to bear fruit.

Marketplace review

A year of recovery, reopening and reflation

Saad Rahim
Chief Economist

2021 was a year marked by recovery and reflation due to COVID-19 resurgence and supply chain bottlenecks resulting in record high pricing. The global economy continues to operate in a multi-speed fashion, with each region rising or falling depending on the impact of COVID-19's successive variant waves, the amount of fiscal and monetary support, and the level and type of exposure to commodities.

While the spread of the Delta variant threatened for some time to derail the economic rebound that had been underway during our financial year, the world has generally been able to recover and move past the worst of that wave, albeit with some significant losses in India, Southeast Asia and parts of the US. Eventually however, as the number of countries imposing lockdown policies that forced the closure of their economies for prolonged periods dwindled, the world economy resumed its upward path out of the short but very sharp recession it experienced in the first half of 2020.

Demand recovery has in many cases exposed and/or exacerbated significant issues in the global supply chain, across manufacturing, transportation and commodities. As reported in our FY2020 results, the impact of the COVID-19 pandemic on the supply of commodities was equal to or in many cases even worse than the hit to the demand side. This was particularly true on the metals side, whereas oil producers acted to cut production voluntarily. Other commodities were also affected by demand outrunning supply, including lumber, tin and coal.

And while COVID-19-related impacts also undoubtedly further weakened supply-side logistics – as in shipping, where record delays in shipping times and order backlogs are at least partly due to COVID-19-induced port shutdowns and ship quarantines – many of the contributing factors to supply-side constraints have been several years in the making. In some cases, these issues are causing a domino-like effect, for example the lack of semiconductors has in turn led to a lack of available trucks, causing chokepoints across a range of other supply chains.

Taken together, this unprecedented mismatch between the supply and demand of commodities has resulted in some historic price movements. It should be noted that these price movements have been the direct result of the state of physical markets, given the lack of deliverable supply when needed.

The higher commodity prices and continuing supply chain bottlenecks, along with recovering labour markets, re-opening of economies and significantly higher personal wealth and incomes, are all combining to create sharply elevated inflation levels around the world. These in turn are leading to rising interest rates and expectations of central banks tightening their accommodative monetary policies. However, as of now and barring a widespread new variant, the strong underlying growth momentum appears to have carried over from our last financial year into this one.

Energy markets

Oil prices (Brent) rebounded by almost 94 percent over the course of our financial year, rising by approximately USD38 per barrel. The rise in prices came despite a brutal second wave of COVID-19 infections and lockdowns over the northern hemisphere winter, followed by another sharp hit from the Delta wave in late summer which meant that oil demand had not yet fully recovered to 2019 levels, as at the end of September.

Demand has recovered more quickly in the US than most places, recovering to its average pre-pandemic level by mid-summer 2021, and even briefly went above it to an all-time high for total products demand. This was driven in particular by a strong recovery in gasoline demand, which is critical for global oil demand given almost one in every ten barrels of oil consumed globally goes into US gasoline engines. This more than offset the lag in jet fuel demand. Similarly, domestic air travel in the US had almost fully recovered by early summer 2021, before taking another hit as a result of the Delta wave. Indeed, given that international travel remained significantly restricted, especially on the busiest transatlantic routes, the recovery in overall US travel points to domestic travel being some way above pre-pandemic levels, despite continuing weakness in the business travel segment.

Brent Crude Futures backwardation (1st month - 2nd month contract)

Source: Bloomberg Finance L.P.

The significant movement of people from higher tax states and densely populated cities to lower-tax, lower-density areas has also created a level of structural demand growth.

Demand in other areas lagged behind the US recovery, at least initially. Europe slowly recovered but jet fuel demand remained subdued, while a full recovery in road transport was hampered by successive COVID-19 waves and slower than expected vaccine roll-outs. China's road transportation demand had already exceeded pre-COVID-19 levels by late 2020, but was again hit when the world's second-largest oil consumer enacted various lockdowns as part of its zero-COVID-19 policy. Demand also suffered as the result of power cuts and efforts to curb energy usage and emissions, all of which led to lower industrial production.

Other major markets saw demand gains retreat at various times as they grappled with the Delta variant wave. India was the first to feel the pain in March 2021. Transportation demand fell precipitously, albeit for a matter of weeks rather than months this time around. Southeast Asia on the other hand struggled from Q2 2021 onwards through to the end of our financial year in Q3 2021, but demand and industrial activities were rebounding strongly into Q4 2021.

On the supply side, OPEC+ continued its supply curtailments, slowly starting to bring back some volumes in Q3 2021, but maintaining a measured rate of increase given the uncertainties around further COVID-19 outbreaks and the pace of demand recovery. Nonetheless, some OPEC+ producers are struggling to match even lower output targets as a direct result of significantly lower investment in recent years.

Even as OPEC+ begun to increase production, US production remained flat throughout our fiscal year. After falling some two million barrels per day from the pre-pandemic peak, down to just over 11 million barrels per day, US production has struggled to maintain this level due to repeated outages from hurricanes as well as the winter-related power shortages in Texas in February 2021. Shale production has moved from being "growth at any cost" to maintaining a committed focus on capital discipline. Although oil rig numbers have more than doubled from their low point, they are only now moving beyond the level needed to maintain production at around 11 million barrels per day. Therefore, the industry remains focused on returning cash to shareholders rather than growing production, and at the current rate it will take some time before US production is back to pre-pandemic levels.

The combination of supply constraints from both OPEC+ and others, and the patchy but sustained recovery in demand, has meant that oil inventories globally have sharply reduced from record levels reached last year. Historically strong backwardation (Chart 1), global inventories below the five-year range and rapidly decreasing Chinese inventories all suggest that the strong momentum in prices that we have seen over the last financial year is set to continue depending any ongoing impact of COVID-19.

Natural gas prices in Europe reached all-time highs, with the European TTF benchmark trading at USD90 per MWh, including some of the highest volatility days ever in September 2021. TTF prices normally average just under USD20 per MWh, so the move up to levels that are more than four times as high has meant significant economic cost for Europe. In some EU countries, governments have had to subsidise prices, while in others industrial production has been curtailed.

Part of the reason for the rise in European gas prices has been stronger LNG demand from Asia due to low hydropower reserves this year in China and also lower coal production. LNG prices in Asia (JKM) reached a record level, rising to USD35 per MMBTU, as the region priced to attract cargoes from other regions, particularly Europe. Major supply disruptions in Russia, and across other gas producers in places such as Australia, Nigeria, Norway and South-East Asia, on the back of a cold 2020-21 winter, meant that European inventories were at extremely low levels coming out of summer 2021. This points to the potential for further disruptions if the continent sees another cold winter. Europe is not the only area that has had to deal with power-related curtailments, with China enacting production cuts, primarily in the energy-intensive steel and aluminium sectors but also in other base metals.

Metals markets

A relatively quick recovery in China, combined with the fact that most countries managed to maintain industrial production and construction even during lockdowns, meant that demand for metals stabilised quite quickly during the pandemic. Supply, however, was severely impacted by ongoing outbreaks and other disruptions to major producers, even as demand recovered. This resulted in strong price momentum over the course of the past 12 months as stocks drew down given the slower recovery in supply.

Copper was most affected by these dynamics for the majority of our financial year, resulting in prices hitting an all-time high in March 2021, closing at USD10,700 per tonne, before stagnating in the middle part of the year and then rebounding into the close of our financial year. Continuing outbreaks and mine lockdowns in Chile and Peru and ongoing disruptions to global logistics chains meant that supply was constrained. On the other hand, demand for appliances, vehicles, housing and electronics all rose as consumers spent savings and stimulus payments. As the scale of the economic impact of the COVID-19 crisis became clear, government-enacted stimulus measures supported industrial activity at a time when the service sector was facing severe headwinds. As a result, global industrial activity not only recovered quickly to pre-COVID-19 levels, but exceeded previous highs. Simultaneously, governments embarked on public infrastructure spending programmes, particularly targeting power generation and other metals-intensive sectors.

In China, smelter output started to be curtailed in Q3 2021 as power shortages began to materialise and these cuts accelerated as the scale of the energy crisis became clear. In the US, an accident at the Kennecott smelter, and disruptions at smelters in Australia, India, Japan and Russia, exacerbated an already tight market, with LME stocks reaching the lowest levels since 2005.

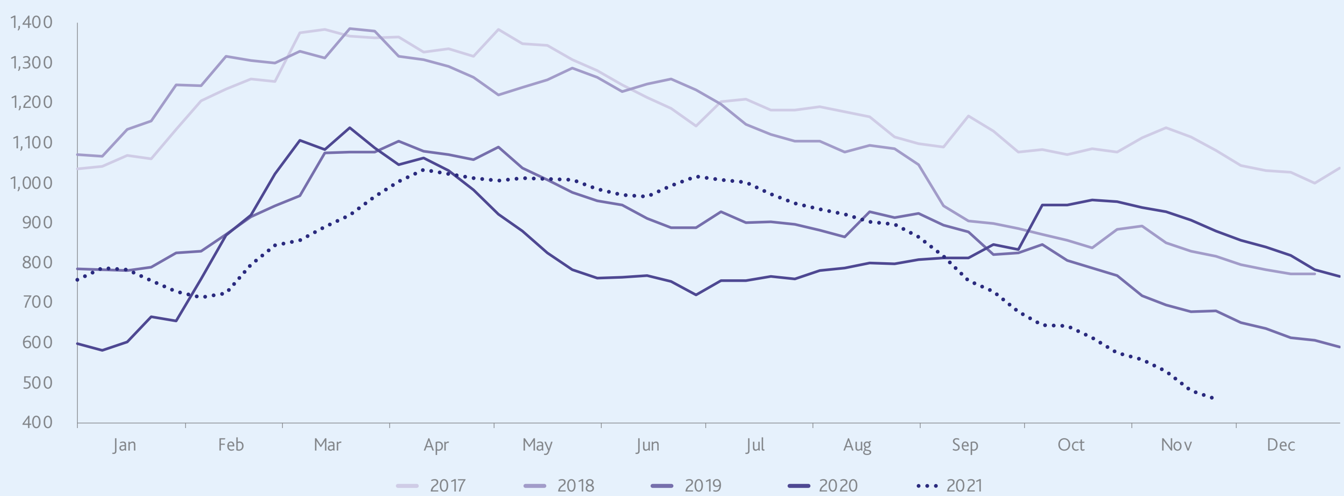
It was a similar story for zinc, as supply curtailments outweighed demand, with the latter picking up strongly over the course of the past 12 months, especially in the US and Europe. Zinc prices reached their highest level since 2018, rising from USD2,327 to just under USD3,130 per metric tonne. Before a shortage of semiconductors dragged the global auto sector to a near halt, Europe in particular saw strong activity in this sector, boosting zinc demand. Demand for vehicles remained very strong throughout the year, but supply chain shortages brought available auto inventories down to record lows. Manufacturers continued building vehicles to the extent possible, keeping demand for zinc robust when it might have been expected to fall. The stimulus plans put into place in Europe have also boosted demand significantly, with infrastructure investment picking up pace, in particular spending on electricity grids in Europe after almost a decade of decline. This is expected to continue as the continent undertakes significant changes to its power generation as part of the transition to cleaner energy.

The US also saw strong demand for zinc from construction, manufacturing and transportation. Housing construction increased by almost 60 percent versus the average over the previous decade. Infrastructure spending started to pick up as a result of various stimulus programmes and automotive production also contributed to solid gains. As a result, demand for metal from both the US and Europe meant that premiums rose to very high levels in order to attract inflows.

Other major markets suffered declines at various times throughout the year as the Delta variant swept through. India was particularly hard-hit in the early part of 2021, and Southeast Asia followed suit soon afterwards. Activity declined both as a direct result of COVID-19 cases and lockdown measures implemented in various countries, with countries in South-East Asia initially attempting to follow China's lead in adopting a zero-COVID-19 approach.

Refined copper stocks seasonality

Stated in k tonnes



Source: LME, COMEX, SHFE, Trafigura Research

As seen in the copper markets, supply outages at zinc mines in Peru and Mexico helped keep the market tight, with the concentrates market following up 2020's sizable deficit with another small shortfall in 2021. Unlike copper however, inventories of refined metal have risen from low levels, partly due to the fact that China's State Reserve Bureau (SRB) released significant strategic stocks into the market. With further infrastructure spending coming in both the US and Europe, the shortage of microchips expected to ease in coming months and the required replenishment of housing inventory in the US, the zinc market is likely to remain relatively tight going forward.

Demand for aluminium suffered throughout the first wave of COVID-19 in 2020, particularly in markets outside of China where primary metal demand fell by -10 percent. Production however, remained unchanged over the same period and resulted in the first aluminium surplus market in over five years.

But as we entered 2021, the market picked up quite strongly, with demand outside of China rising by over 14 percent and Chinese demand growing by six percent compared to 2020 levels. Primary consumption remained strong despite an even stronger increase in scrap demand, which rose by 12 percent year-on-year. By the end of the 2021 financial year, aluminium prices had reached some of their highest levels since 2008, as a result of strong demand and capacity reductions in China due to energy and emissions curbs. Prices therefore climbed steadily from just under USD1,750 per metric tonne to close to USD3,000 per metric tonne.

The current issue faced by the aluminium industry is that almost all of the production capacity growth over the last decade has been in China. Global demand for aluminium rose by 80 percent during the 2007-2020 time period, while capacity outside China essentially stayed flat.

Chinese smelting capacity is now 3.5 times as large as it was in 2007, supplying well over half of the world's output. But going forward, China has taken a policy decision to no longer be the world's supplier and to stop building new smelting capacity after the current slate of projects is completed in 2023.

We have already seen the ripple effects of changes to China's aluminium capacity, where there were production reductions as the result of attempts to curb both emissions and energy usage. As a result, the market has been very tight in China, again forcing China's SRB to release tonnes into the market from strategic stocks. This has not prevented premiums for deliveries into the US and Europe from rising to decade high levels, in particular into the former.

As demand continues to rise globally, with, unusually for metals markets, ex-China demand outstripping China demand growth over the next decade, it is hard to see where the capacity will be found to meet demand. Demand is expected to grow by just under 40 percent to the end of the decade, driven in large part by increased use of electric vehicles and renewable energy, both of which are significantly aluminium intensive. However, even with sharply higher scrap usage, the lack of new capacity leaves a major deficit, much as we see in other metals.

Nickel markets had a bumpier ride than the other metals markets, although prices generally trended upwards throughout the year and ended significantly higher than the starting point, rising by circa 25 percent to just under USD18,000 per metric tonne by the end of September 2021, compared to just under USD14,400 per metric tonne one year earlier. However, at various points in the year nickel prices rose to around USD20,000 per metric tonne with sharp drops following these peaks. The first drop came at least partly as a result of Tesla indicating that it would be switching more of its batteries to lithium Fe/iron phosphate (LFP) battery technology given concerns around availability of nickel. Prices then fell over USD2,500 per metric tonne (-14 percent) on news that China's largest stainless-steel producer, Tsingshan had pledged to ramp up supply of intermediate material known as nickel matte to some of the large Chinese battery manufacturers.

Going forward, market development will be led largely by the bifurcation of the market involving the different types of nickel. Class I supply, derived in large part from nickel matte, is generally the only type acceptable for usage in batteries, and increasing demand from this sector is pointing to significant deficits in the Class I market going forward. Meanwhile, Class II is derived from nickel pig iron, ferronickel and nickel oxide, and is used in the production of stainless steel. The announcement from Tsingshan, that it could provide nickel matte from nickel pig iron, which is much more plentifully available, would mean that the deficit in Class I would not be quite as material and that this availability would therefore loosen the market and pressure prices. However, the process is significantly more energy intensive and, relying as it does on coal for this energy, results in much higher carbon emissions as well as other environmental impacts. Given that the major use case for the Class I material is in electric vehicles, producing much higher carbon emissions to produce the material looks to be an unresolvable challenge for the auto manufacturers and therefore, it is unclear what the uptake of this process will be.

Performance review
Oil and Petroleum Products

For a second consecutive year, Trafigura's Oil and Petroleum Products Trading division recorded record profit and total volumes traded, further cementing the Group's position as one of the world's leading independent traders of energy products.

Ben Luckock
Jose Maria Larocca
Hadi Hallouche
Co-Heads of Oil Trading

61%

Contribution to global revenue
(2020: 57 percent)

330.3mmt

Total volume traded
(2020: 269.8mmt[1])

Oil and Petroleum Products volumes traded (mmt)	2021	2020
Biodiesel	**0.6**	0.5
Bitumen	**0.3**	0.1
Condensates	**1.7**	1.9
Crude oil	**156.0**	127.5
Fuel oil	**38.4**	27.0
Gasoline	**24.8**	21.6
Liquid petroleum gas (LPG)	**8.3**	5.9
Liquid natural gas (LNG)[2]	**14.0**	12.7
Middle distillates	**46.7**	40.0
Naphtha	**16.2**	12.0
Natural gas (2018)[2]	**23.2**	20.5
Total	**330.3**	269.8[1]

[1] 2020 LNG and natural gas volumes have been restated to be in accordance with recognised revenue line in the income statement.

[2] Million metric tonnes of oil equivalent.

Performance overview

As significant dislocations continued to affect global markets for the entire energy complex during 2021, Trafigura's Oil and Petroleum Products Trading division saw a continuation of the strong performance recorded in the previous financial year. This performance was driven by growing trading both volumes and turnover, which delivered a substantial increase in market share at a time when the global market has not yet recovered to 2019 total volumes.

Key to this performance, which amounts to a comprehensive rebasing of the company's position in the oil market, was a relentless focus, even in the toughest market conditions, on customer relationships and reliable service. Coupled with a financial flight to quality that has seen Trafigura continue to expand its access to liquidity, this has enabled us to build and cement quality, long-term relationships with upstream and downstream customers around the world, who have appreciated our support during the volatile conditions arising from COVID-19.

Our global footprint and ready access to market infrastructure puts us in a strong position to manage integrated supply chains on behalf of our clients as well as to help rapidly close arbitrage and inefficiencies in the market. We have continued to diversify the trading book to reflect a changing global market. We expanded our bunkering, gasoline and biofuels books into new markets for the Group during the year and continued to invest in infrastructure, including continuing to build out our crude oil and refined products tankage and pipeline capacity in the Texas market.

We also invested in Sawtooth Caverns, the largest natural gas liquids storage facility in the Western US, located near Delta, Utah. On the upstream side, we acquired a ten percent stake in Vostok Oil LLC, a major new Russian oil and gas company operated by Rosneft which is expected to have a carbon footprint approximately 75 percent lower than that of other major new oil projects internationally.

These investments underline our belief that, even as the energy transition gathers pace, the world's rapidly growing population and energy needs will continue to require the more traditional forms of energy for many years to come.

▲ Prax Group's Lindsey Oil Refinery in the UK.

As is evident from our Vostok Oil investment, we are focusing on lower-carbon oil and gas resources and will continue to ensure that we can meet global demand for these products throughout the transition, providing energy equitably for all society.

Carbon intensity is another key factor of the energy transition and is set to become a major new specification for commodities, including oil and gas. Through our recently established and expanding carbon trading team, we are also putting efforts into helping our customers and suppliers calculate, verify and reduce carbon emission from cradle to gate, including transportation.

Crude oil

The global crude oil market was in shallow backwardation, meaning spot prices were slightly higher than futures for much of the year, making for challenging trading conditions. Volumes traded in 2021 grew in every region, thanks to global coordination across the Group, and physical margins remained strong by comparison with most recent years.

Core to our crude oil strategy is the Midland shale oil basin in Texas, where we continued to invest in infrastructure such as pipelines, tanks and dock facilities, enabling us to ship US crude oil to world markets. Another highlight of the year was a major supply arrangement to source all the feedstock requirements of the UK Prax Lindsey Oil Refinery, a significant expansion of Trafigura's relationships with refiners and a sign of new opportunities opening up as some of the oil majors reduce their downstream commitments. We also secured new offtake agreements in Canada, Latin America and West Africa.

Trafigura is one of the few crude oil trading houses positioned to operate an integrated supply chain from wellhead to refinery, based on close cooperation between the crude desk and the in-house shipping team and the use of Trafigura-owned vessels or long-term charters.

The protracted stock drawdown that created a backwardated market in 2021 is now complete; prices have been rising accordingly and we expect this trend to continue into 2022, underpinned by general under-investment in new crude oil production. We expect our services in supply chain management and connecting supply and demand to be in even greater demand. Rather than releasing oil to the market in aggregate as takes place in a backwardated market, we are focused again on serving customers along the forward price curve. We are optimistic about performance for 2022 and expect to maintain growth on the strength of our global network and diversified trading model.

Gasoline

In 2021, the gasoline market continued to experience the impact of COVID-19 on demand, with a significant supply surplus giving way to a protracted stock drawdown and generally rising prices. With new mega-refineries coming online east of Suez, the global flow of gasoline is shifting, with more production coming from the east and the west relying more on this source, in a reversal of the traditional west to east flow. Market conditions put a premium on managing risks associated with tankage capacity, which becomes costly to hold in a backwardated market.

Trafigura's gasoline team performed well, with volumes traded slightly up on the previous year. In more developed markets, as refineries shut down or convert to biofuel plants, and despite the expected long-term decline in gasoline demand, we expect there to be continued supply side shortages and increased volatility as the momentum from the energy transition continues to build.

Looking forward, we see the transition increasing in importance as a theme for gasoline trading and are actively looking for investment opportunities that this will generate.

www.trafigura.com/products-and-services/oil-and-petroleum-products

Naphtha and condensates

Naphtha was in strong demand throughout our financial year, a situation underpinned by the recovery of the global petrochemicals industry and by the addition of new petrochemicals capacity in Asia. However, naphtha supply failed to keep pace, since refinery runs were constrained by weak retail demand for fuel. Consequently, the supply-demand balance remained tight and naphtha prices hit ten-year highs, with the rising price of LPG adding strength to the naphtha complex. In condensates, it was a challenging year as a result of poor refining margins.

Trafigura's naphtha and condensates team reported a strong performance in 2021. Volumes were broadly similar to those in 2020 and diversification enabled us to benefit from volatility, while also being positioned to provide extra supplies under flexible contracts in response to market signals. Another highlight of the year was the team's pioneering work on structuring the world's first carbon offset naphtha and condensate cargoes, with Woodside and Braskem respectively. We are working with counterparties to calculate, reduce and potentially offset GHG emissions from cradle to gate.

The outlook for naphtha in 2022 is for increased supply, as the return of passenger mobility drives higher refinery runs. Meanwhile, rising energy prices are starting to eat into manufacturing margins and dampen economic growth, and industrial supply chains are suffering increasing disruption from the after effects of the pandemic. This could result in some erosion of naphtha demand. Condensates, however, are expected to continue to track crude oil prices higher. We are well positioned for these changes, by maintaining our tried-and-tested diversified portfolio approach.

Fuel oil

Bunker markets stabilised in 2021 after the readjustments that accompanied the IMO 2020 rule change reducing permissible sulphur content in maritime fuel. Fuel oil prices moved up in tandem with crude oil and by the end of the financial year were double the level 12 months previously. In the second half of the year, as the impact of COVID-19 faded, the market saw a significant pull of Asian demand driven by the use of fuel oil in power plants, which was caused by global shortages of coal and gas power.

Trafigura's fuel oil trading desk performed well in challenging conditions, adapting arbitrage positions to the new pattern of specifications and requirements in different regions and optimising flows to match new market requirements. Traded volumes increased strongly during the year and despite intense competition, Trafigura maintained an elevated level of competitiveness in a much less volatile market compared to 2020.

The team was also in expansion mode, adding personnel and building out cooperation with the TFG Marine bunkering joint venture. The growth of TFG Marine has given Trafigura's Fuel Oil desk a much larger trading platform and improved access to customers across the globe, especially in Asia where larger opportunities lie.

Looking forward, the key challenge will be understanding how supply and demand are likely to change in a post-COVID-19 world, with a number of large new refineries coming online and demand dynamics evolving fast as bio-bunker and alternative fuels enter the market. Liquefied natural gas, gasoil and crude oil prices will have increasing influence over fuel and feedstock markets, meaning exceptional inter-product communication at Trafigura will continue to provide a strategic advantage. We intend to grow our fuel and feedstocks business further through close customer relationships and cooperation with TFG Marine and its other trading partners, with a target to build a leading position in alternative fuels and to provide sustainable long-term solutions to customers.

Distillates

COVID-19 remained the primary influencing factor of the distillate market in 2021, with continued high infection rates and restricted movement delaying the recovery of distillates demand for the first half of the year. However, as the vaccine roll-out gathered pace and global travel restrictions eased during the summer, the long-awaited boost to demand arrived.

This nascent demand recovery came at a time when Chinese government policy had a material impact on the market, through the introduction in May of a tax on imported light-cycle oil and other products and through a waning Chinese commitment to meet international petroleum product demand. These factors affected diesel supply, as did continued OPEC policy discipline and rising crude oil prices, driving up refiners' costs of production. With the supply side facing impediments to growth and increasing demand, we saw a significant tightening of distillate balances and the return of sustained backwardation for the first time in several years.

The Distillates team performed successfully in a year of heightened volatility, identifying and capitalising on numerous growth and investment opportunities without losing focus on attendant risks. For example, we systematically looked to reduce costs across our global portfolio to ensure that the storage positions that had proved so profitable during the pandemic did not become overly burdensome in backwardated markets.

We closed the year with increased volumes and successful entries into numerous new markets. While backwardation will likely prove challenging to some physical markets in the coming year, we remain confident that the team is well positioned to navigate these headwinds while supporting our customers to secure product in volatile markets.

Biofuels

The biodiesel market experienced significant disruptions throughout 2021, pushing prices higher. Extreme crop shortages set the tone for most vegetable oils markets, generating unprecedented tightness and volatility on oils and biodiesel complexes.

In 2021, the reconfigured Trafigura biofuels business became an integral part of the division's refined products book. This included successfully penetrating the European market, offering key customers tailored biofuels solutions to reduce their greenhouse gas footprint and contribute towards sustainability requirements.

Trafigura was able to explore unique supply opportunities across the biofuel spectrum and deploy its global network and logistics capabilities to move these products to new markets. The team is now active in various biofuels supply chain segments, ranging from road transportation to maritime bio-bunkering. We are also leveraging our existing global Trafigura and Puma Energy UK infrastructure as a natural outlet for our biofuels origination in Asia.

In 2022, we expect the biofuels market to remain volatile and become increasingly fragmented as sustainability requirements become more stringent globally. Looking ahead, we expect the desk's continued growth for 2022 with further integration of bioproducts into the current refined products mix.

Liquefied petroleum gas

The liquefied petroleum gas (LPG) market in 2021 was defined by increased LPG export capacity in the US and propane de-hydrogenation capacity growth in China. The export infrastructure bottleneck that had limited flows from the US for most of the past ten years was alleviated and as a consequence, US exports hit a record high, while US inventories were drawn down to record lows. These factors, combined with the natural gas rally that resulted from increased LPG demand as a replacement fuel, drove LPG prices higher, especially in the US.

Trafigura continued growing its LPG business, with expanded flows from the Far East, Russia, the US and West Africa. Our analytical capabilities enabled us to predict market movements. We also invested in new projects promoting the increased use of LPG, including a number of dual-fuel LPG-ammonia powered ships.

Separately, we were instrumental in establishing LPG4SDG7, a coalition of companies, banks and development institutions to help bring cleaner cooking based on LPG to millions of households.

Looking ahead, we will continue growing our business to better serve our clients around the globe and we will continue to grow and diversify the business.

Liquefied natural gas and natural gas

The global liquefied natural gas (LNG) market was buffeted by extreme weather in 2021. The Far East experienced a severe winter shortage of LNG in January, Texas suffered from its big freeze in February and Europe suffered gas shortages in the latter part of the year. LNG supply would have been tight in any case as plants were subject to maintenance that had been delayed by COVID-19 and a number of facilities experienced greater than usual reliability issues. In Texas, gas prices hit USD400 per MMBTU in February, while in October, Europe and the Far East out-competed each other to attract US LNG, pushing the price up above USD35 per MMBTU as low inventories in Asia and Europe caused market concern.

Trafigura's integrated LNG and natural gas team performed well, weathering the multitude of storms the gas market experienced during the year. Our business grew in all regions, especially strongly in Asia. We complemented our existing natural gas trading operations in Europe, Mexico and the US by acquiring licences to trade gas in other liberalising domestic markets.

In these extremely volatile times, simplicity of supply chains remains our guiding principle. This ensures robustness to withstand extreme weather shocks and operational excellence to provide safe and secure LNG supplies to our customers, and allows us to minimise carbon emissions from our modern LNG fleet.

Our goal over the next 12 months is to work with our customers to create solutions that protect them as much as possible against such price fluctuations in the future. Recent events have illustrated that natural gas is vitally needed to fuel baseload power supply alongside renewable power and, in some applications, as a transition fuel on the pathway to net zero.

Performance review
Metals and Minerals

Despite the continued challenging global conditions experienced throughout 2021, the Metals and Minerals division continued to grow and serve a broader range of producers and customers. Consequently, 2021 was one of its most profitable years on record, trading 105.5 million tonnes in total.

39%

Contribution to global revenue*
(2020: 43%)

*Metals and Minerals revenue as percentage of Group revenue includes bulk minerals.

Kostas Bintas
Head of Copper

Philippe Müller
Head of Aluminium and Alumina

Socrates Economou
Head of Nickel and Cobalt

Gonzalo De Olazaval
Head of Zinc and Lead

22.8mmt

Total volume non-ferrous concentrates and refined metals traded
(2020: 20.9mmt)

Non-ferrous concentrates and refined metals traded (mmt)	2021	2020
Concentrates total	13.3	11.0
Refined metals total	9.5	9.9
Total	**22.8**	20.9

Ken Loughnan
Head of Bulk Minerals

82.7mmt

Total volume bulk minerals traded
(2020: 76.7mmt)

Bulk minerals volumes traded (mmt)	2021	2020
Iron Ore	**23.1**	19.8
Coal	**59.6**	56.9
Total	**82.7**	76.7

Performance overview

The key theme of 2021 in the global markets for non-ferrous concentrates and refined metals was the tension between rising demand on the one hand, and tight supply on the other, with supply disrupted by the effects of the COVID-19 pandemic but more fundamentally constrained by under-investment over recent years. Many of the non-ferrous metals Trafigura supplies have been identified as strategically important for electrification and the energy transition to low- and zero-emissions power and fuels that will be required to meet the world's climate goals. This means that demand growth, which for many years had been mainly a Chinese phenomenon, is now global. The result has been rising prices, increased volatility and big shifts in geographic flows.

Trafigura's position as the world's largest independent metals trader strengthened further during the year with volumes handled growing by eight percent, thanks to our global network of customer relationships among producers, refiners and consumers and our storage, blending, risk management and logistics capabilities.

We also continued to reap the fruits of the decision, taken two years ago, to merge concentrates and refined metals trading teams, thus ensuring more seamless collaboration and sharing of market intelligence, and ultimately, better customer service. Synergies have also been derived from our close cooperation with the Nyrstar smelting business and other asset investments, including the acquisition of a minority interest in the Prony Resources nickel mining operation in New Caledonia in March.

In bulk minerals, our iron ore business had a strong year, growing volumes and increasing market share. The coal book also experienced a stronger than average year due to increased price volatility, price dislocations and significant shifts in global trade flows.

▲ Copper cathode and concentrates being prepared for export, Ndola, Zambia.

Non-ferrous concentrates and refined metals

Copper

For the global copper market, 2021 was a year with significant supply deficit emerging as investment in the transition to a green economy gathered pace. We witnessed phenomenal consumption growth in copper, with trends relating to the climate transition that favour this commodity, such as electrification, renewable power and electric vehicles, driving prices to all-time highs and causing a tight market to become the new normal.

A market that has largely depended on Chinese consumption growth for the past 15 years is now seeing significant growth elsewhere, diverting units from China. In addition, significant increases in freight costs mean that traditional flows are being challenged with more cost-effective alternatives.

It was an exceptional year for Trafigura's copper trading desk, rewarding our long-term commitment to the physical business and customer service. Volumes increased in all regions and segments, and we added experienced recruits to the team to help us handle increased non-China flows, which were especially strong in Europe and the US. Trafigura divested its stake in the MATSA polymetallic mining operation in Spain during the year, but we maintain off-take rights for the life of the mine.

We continued to reap the benefits of creating a consolidated department across refined metals, concentrates and derivatives, ensuring that the book strategy is well coordinated. This was particularly important in an environment of continuous structural change in the copper market. Despite ongoing travel constraints, Trafigura's strong network of customer relationships and offices around the world allowed us to maintain our competitive edge and first-class customer service.

In 2022, we expect the tightness in the market to continue, creating more volatility. Our priority is to ensure the successful management of this volatility and the accompanying risks that arise for producers and customers.

Alumina and aluminium

A combination of strong demand and strained supply chains created a perfect storm in the aluminium market in 2021, with prices rising 70 percent compared with last year's average. As the strong story behind the aluminium market developed, so did interest from the investment community.

The fundamentals in 2021 were the complete opposite of events in 2020. A power shortage in China forced substantial reductions in aluminium production. Meanwhile, global stimulus relating to COVID-19 pushed up demand for construction and infrastructure projects. Also, severe constraints on global freight markets underlined the importance of the services provided to a global and interconnected market, with container freight rates rising threefold over the year. Many other existing themes grew in importance, including rising demand for low-carbon aluminium and the need for supply security in a market increasingly moving towards structural undersupply. Over the course of the year, Trafigura further grew its market share, increased volumes traded and improved profitability.

The outlook for 2022 and 2023 depends on whether the world can truly adapt to a new normal of tight supply, strong demand and more complicated logistical concerns. Trafigura's long-established position in the physical aluminium market means that we remain well placed to serve our customers while continuing to expand our trading book. As the largest independent global alumina and aluminium trader by volume, our focus will be on helping our customers navigate these volatile and unpredictable market conditions.

www.trafigura.com/products-and-services/metals-and-minerals

▲ Trafigura Group's equity investment: Prony Resources cobalt-nickel mine in New Caledonia.

Nickel

The global transition to electric vehicles is now well underway and nickel is a key beneficiary. Alongside a stronger than expected stainless steel market in China, this development drove a 16 percent increase in global demand in 2021. Meanwhile, supply growth underperformed in Indonesia, resulting in a significant drawdown of global nickel stocks to fill the gap.

Trafigura's nickel team had a record year with margins and volumes relating to both battery and stainless steel-related products increasing substantially. We continued to reinforce our position as a leading company in supply-chain management, offering innovative services to our counterparties.

With a strong focus on long-term business and securing supply, we concluded multi-year offtake and marketing contracts that can service our growing customer base in the years to come. Most notably, the investment in Prony Resources in New Caledonia is strategically important, as it is one of the world's largest producers of nickel intermediates. Along with our minority investment in Terrafame in Finland, where nickel sulphate production commenced in July, Trafigura now markets a significant proportion of the raw materials required by the electric vehicle battery industry.

Long-term offtake contracts with nickel sulphide concentrate producers, including Panoramic Resources and nickel pig iron producers in Indonesia, will further reinforce our strong presence in the stainless steel raw material supply sector going forward.

In anticipation of evolving policies and the needs of our customer base, we are the first trading company able to offer traceability and verification of the carbon footprint (CO_2-e emissions) of material we source and supply. This is a unique service that has been received with enthusiasm from electric vehicle battery producers and car manufacturers.

Looking forward to 2022, we see a meaningful surplus materialising from the second half, with the introduction of nickel pig iron-to-matte in Indonesia alongside further nickel pig iron output growth. However, given that this process produces three times more CO_2 compared to the current market average for nickel sulphate production, it is not clear that this product will find a place in the electric vehicle battery supply chain.

Cobalt

With the aerospace industry still affected by COVID-19, the cobalt metal market has yet to recover to pre-pandemic levels. However, the chemicals segment, now accounting for over 70 percent of global consumption, experienced solid growth in 2021. Accelerating electric vehicle sales and the roll-out of 5G networks continued to be the major demand drivers.

To supply current and future volumes of cobalt, the battery supply chain relies on material sourced from the Democratic Republic of the Congo. Gigafactories are being built globally and original equipment manufacturers are strategically positioning themselves to lock in long-term contracts. Trafigura's responsible-sourcing diligence process gained further traction over the course of the year, with comprehensive outreach and support delivered to a number of our producer counterparties.

In response to the threat of COVID-19 and with a view to safeguarding the health of workers onsite and surrounding communities, in March 2020, operations at the Mutoshi Pilot Project, a partnership with Shalina Resources and the non-governmental organisation Pact, were suspended. Subsequently, it was determined that operations would not restart in 2021 as a result of changes to the law in the country that saw the establishment of Entreprise Générale du Cobalt (EGC), a state-owned entity responsible for the purchasing of all artisanal and small-scale mined cobalt. EGC was established in response to two decrees issued in November 2019 by the Prime Minister and the Minister of Mines of the Democratic Republic of the Congo. The role of EGC is to purchase, process and sell cobalt produced by artisanal miners or companies involved in artisanal and small-scale mining in the country.

Trafigura has entered into an offtake agreement with EGC, which is the first of its kind. The trading agreement includes the provision of finance by Trafigura to fund EGC's creation of strictly controlled artisanal mining zones, the installation of ore purchasing stations and to cover costs related to the transparent and traceable delivery of cobalt hydroxide to Trafigura on an export-cleared basis. Under the supply terms, EGC warrants that the ore marketed by Trafigura complies with the terms set out in the *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas*. Trafigura will market the output of the EGC operation through its global network to a number of end-users that have already committed to integrating this product into their supply chain. Trafigura intends to ensure that all purchasers, as determined by EGC, are provided with access to a blockchain solution, which will provide full transparency of product flow through the value chain and corresponding ESG performance prior to receipt.

Trafigura also continues to supply its customers with cobalt hydroxide from its long-term commercial collaborator Shalina Resources and we are increasing our offering of other products, including cobalt metal and sulphate, in Europe and Asia. Cobalt remains crucial for thermal stability in ternary batteries. Consequently, despite efforts to reduce cobalt content within battery cells, we expect the market to approximately double in size by 2026.

Zinc and lead

Zinc and lead mine supply rebounded strongly in 2021 following disruptions caused by the first phase of the pandemic, particularly in South America. Zinc concentrates have swung from a substantial deficit to a position of balance globally, easing supply pressure midstream but failing to allow concentrate restocking. A number of Chinese mines were disrupted during the year as a result of the country's power supply problems. However, smelters were more strongly impacted, with assets forced to curtail output in multiple provinces.

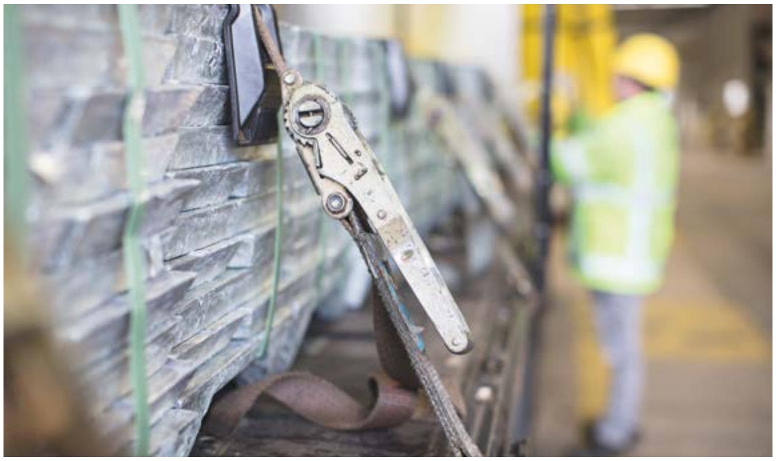
Demand for refined zinc was robust with notable strength in the mature markets of Europe and North America. Increased consumer spending and government funds to support COVID-19 recovery are propelling higher levels of activity than have been seen for several years in these locations. Falling exchange stocks, elevated ingot premiums and the curtailment of production in Europe, as a result of surging electricity costs at the end of the year, point to an undersupply of zinc metal as the construction, infrastructure and machinery sectors continue to grow.

In the lead concentrates market, a recovery in mine supply has coincided with disruptions to many primary smelters, whether from climate events, economic pressure or logistical bottlenecks constraining feed access. Scrap availability varies by region, with high operating rates at China's secondary smelters keeping stocks low, while plant curtailments elsewhere are lifting inventory.

Refined lead market conditions have been markedly different inside China compared to the rest of the world. Rapidly rising Shanghai exchange stocks highlight increasing production from secondary smelters and weak demand conditions in China, while in the rest of the world, the steady loss of smelting capacity has forced exchange stocks to draw and premiums to rise as supply is constrained.

Despite the aforementioned challenges, trading performance on the zinc and lead desks responded well to these market shifts in 2021, benefitting from strong customer relationships and synergies between the global trading book, mining assets and the Nyrstar smelting business. Overall, the zinc and lead book grew volumes by close to 20 percent and profitability was according to expectations. As such, we are well positioned to deliver value from the evolution of the lead and zinc markets going forward.

▼ Zinc storage at Nyrstar's Pelt facility in Belgium.



Bulk minerals

Coal

It was a turbulent year for the global coal market, as a strong recovery in demand driven by rising industrial production collided with supply constraints and other restrictions, notably China's decision to effectively ban imports of Australian coal. Producers knocked out when the pandemic first hit demand have been slow to ramp up production, leaving the market in global deficit since mid-2020, while growing antipathy to coal as a commodity has created an additional drag on production. Prices for some products reached record highs during 2021, while volatility was also pronounced. Australian coal, deprived of one of its top two markets, needed to find new buyers, while China partly replaced Australian volumes with supplies from the Atlantic market and increased imports from Indonesia. The consequences included longer shipping distances and higher delivered costs.

Trafigura's global coal trading desk had a good year, with volumes stable year on year and a strong financial result. The business is well positioned to meet the requirements of counterparties as the energy transition gathers pace. In 2021, this meant consolidating the number of producing and consuming counterparties we work with and aligning ourselves closely with them. Given the continuing economic uncertainties caused by COVID-19 and the trade dislocations in Asia, this enabled us to provide exceptional levels of service to our trading partners. On the demand side, our Chinese volumes grew, and among suppliers, we expanded flows from Canada, Indonesia and Russia and commenced a strategic offtake agreement, expanding volumes from South Africa.

In the next 12 months, we expect to see a continuation of extreme price volatility. Trafigura's strategy is to consolidate thermal coal flows and expand coking coal activity.

Iron ore

The iron ore market experienced significant volatility in 2021, principally as a result of policy uncertainties surrounding steel production in China. Curbs on output were announced in December 2020, but implementation was slow, and it was not until July 2021 that production cuts took full effect. This tipped what had been a broadly balanced global iron ore market into a supply surplus, and prices plunged from a peak of USD220 per tonne in the first half of the year to below USD100 by year end.

These were not easy trading conditions and Trafigura's iron ore desk focused on expanding sources of offtake, including strong growth in Indian volumes, growing seaborne volumes and China portside trade, and consolidating the position of the Porto Sudeste brand in the European and Chinese markets. We were pleased to arrange a number of structured solutions for customers at origin and destination that helped to increase volumes by 17 percent year-on-year.

Over the next 12 months, we expect continuing volatility as non-China steel production volumes ramp up to meet post-COVID-19 stimulus demand.

Performance review

Power and Renewables

As the climate transition gathers pace, Trafigura is building a presence in fast-evolving power and carbon markets and investing in new energy technologies.

Julien Rolland
Head of Power and Renewables Trading

$80m
Underlying EBITDA

$68m
Investments in renewable projects[1]

1.7GW
Renewable energy secured[2]

[1] Includes investments in clean energy projects, by our Power Trading team and Nala Renewables.
[2] Nala Renewables.

Performance overview

In November 2019, Trafigura announced the establishment of a new business line trading and investing in power and renewable energy. In the 2021 financial year, this vision took shape, with the ramp-up of electricity trading activities in Europe and the US, the creation of a carbon trading desk and investments in renewable power, battery storage and new energy technology projects.

The focus during this first full year of operation was recruitment, setting strategy and establishing necessary infrastructure. Nevertheless, we made a good start in trading both power and carbon. This activity generated underlying EBITDA of USD80 million. Combined investments by the Nala Renewables joint venture and our Clean Energy Ventures Fund amounted to more than USD68 million.

Achieving profitability in the first year of trading activity is very encouraging and underlines our view that the Power and Renewables division is set to become a third significant pillar of Trafigura's trading business alongside Oil and Petroleum Products and Metals and Minerals. Of particular interest are the synergies with other parts of Trafigura's business. Power trading is a natural complement to the company's established positions in gas, for example, while carbon trading enables us to offer a range of new services to our clients, including carbon-offset investments.

▲ The SKS Douro being loaded with the first shipment of carbon offset condensate in Western Australia.

Power trading

This is a time of significant upheaval in power markets, as a result both of COVID-19 and deeper structural shifts occurring within the power generation industry, notably the transition to renewables. Across 2020 and 2021, the world witnessed one of the most dramatic shifts in supply and demand balances for electricity in recent history, with the market going from significant over-supply to deficits in the space of just 12 months.

In 2021, as the demand destruction caused by COVID-19 began to fade, power markets rebounded strongly, especially in Asia, while consumption in the US showed renewed growth after years of flat or negative demand. The resulting market tightness was compounded by COVID-19-induced maintenance delays on key capital equipment, weather-induced shortfalls in renewable production in several parts of the world and spikes in natural gas prices due to the fall in Russian supplies. Extreme weather events such as the Texas freeze in February created additional volatility. The structural shift away from coal and nuclear towards wind and solar is also causing severe strains in the power system. The retirement of conventional generation assets is increasing the impact of renewable energy production on market pricing and reducing the amount of available flexible generation.

The Trafigura power trading team had an excellent first full year of operation, with decent profitability in challenging markets where increased volatility created new requirements for capital and where an influx of new interest in the sector fuelled competition for talent. We established full trading capability in key European and US markets as well as building analytics, models and risk metrics. In the US, capacity was enhanced by the acquisition of a 75 percent stake in a niche trading platform in Denver with a team of highly skilled power trading personnel focused on short term US power markets.

Physical trading, deal structuring and risk management services are likely to continue to rise in importance in power markets in the medium term to enable producers and consumers to mitigate the impacts of volatility, effectively monetise production and secure supply. These services are the kind that Trafigura has provided for nearly 30 years in the oil and metals markets, and we see bright prospects for continued growth of the power trading team in the years ahead.

Carbon trading desk

In April 2021, Trafigura announced the establishment of a new carbon trading desk, focused on global compliance and voluntary carbon markets. Both categories of carbon market are the subject of increasing trading interest: the price of carbon allowances in regulated emissions trading systems has been steadily rising, while voluntary markets are becoming increasingly relevant to corporations in meeting their net zero commitments.

Trafigura's carbon trading desk has three areas of priority focus: day trading and arbitrage in global compliance and voluntary markets; working with developers of carbon projects to structure and finance new transactions or the expansion of existing projects; and offering a suite of services to established Trafigura clients looking to reduce the carbon footprint of their supply chains.

The priorities for the desk's first few months of operation were recruiting expert staff and securing the necessary registrations and authorisations. The team consists of professionals located in Geneva, Houston and Singapore, with expertise in trading, deal structuring and origination and technical knowledge to enable the assessment of removals and avoidance projects, United Nations and government policy and regional regulations.

Notably, the team has achieved some early success in securing long-term offtakes and growing spot traded volumes. There has been strong demand for services and we are helping producers and customers across a wide range of sectors to quantify, verify, reduce and mitigate supply chain emissions. An exponential ramp up of activity across the book is expected in 2022 as the regulatory and political environment continues to accelerate momentum to reduce emissions. This includes the recent historic agreement to approve the Paris Agreement Article 6 Rulebook at the COP26 climate talks in Glasgow, Scotland in November. We view this as an important step forward in facilitating the development of carbon markets globally and accelerating the flow of private sector capital to developing countries.

www.trafigura.com/products-and-services/power-and-renewables/

Nala Renewables

Nala Renewables is a 50:50 joint venture between Trafigura Group and IFM Investors established in September 2020 with the aim of investing in on-shore wind, solar and power storage projects. As 2021 was its first year of incorporation, the focus was on creating a management team and building the initial business pipeline.

A key milestone was the appointment in April of CEO Jasandra Nyker, an executive with over 20 years of experience in investing in and developing renewable and clean energy projects. Nala Renewables is headquartered in London with representatives in Geneva, Switzerland and Munich, Germany. Its priority markets in 2021 were the US and Europe and it made a good start in kicking off development in these regions.

Nala Renewables' most material transaction to date was the acquisition, together with Buckeye Partners, of a majority ownership of leading North American clean energy development and investment platform Swift Current Energy, a renewable energy platform aligned with Nala Renewable's strategy. Boston-based Swift Current has commercialised more than 1.1GW of renewable projects since 2016 and has a pipeline of over 6GW of solar, wind and energy storage projects located close to US demand centres in major power markets, including more than 2GW attributable to eight solar projects currently in late-stage development.

The Swift Current portfolio constitutes the majority of the 1.7GW development pipeline that Nala Renewables had secured by the end of the year.

Another early project involves investment of up to EUR30 million to develop one of Belgium's largest battery energy storage systems at Nyrstar's zinc smelting facility in Balen. Permit approvals were secured in 2021 and the construction phase is expected to be completed by the end of 2022. Utilising lithium-ion battery technology, the 100MWh battery project will be able to store 25MW for over four hours. The battery energy storage system will provide stability and balancing services for the Belgium grid, as well as help shift renewable energy production into high-energy demand periods.

Nala Renewables now owns and is developing assets in Belgium, France, Netherlands, Poland and the US.

www.nalarenewables.com

Investments in clean energy ventures

In 2019, Trafigura established an internal VC-like fund to invest in various start-up projects involved in alternative and renewable energy technologies.

The focus for investment is three-fold: to gain access to experienced teams and intellectual property in early-stage, pre-revenue companies in the sustainable energy space; to support the conversion of their intellectual property into viable development projects; and ultimately, to help generate trading flows for existing or new Trafigura trading desks. The investment decisions are guided by an investment committee comprising four members of Trafigura's Management Committee, thus ensuring all activities are fully aligned with Group strategy.

To date, six investments have been made of a total value of more than USD30 million in three technology areas of priority focus: hydrogen and hydrogen-based fuels; medium-to-long-term electricity storage; and emissions capture. They are already providing Trafigura with unique insights into sectors that will be extremely important to its future strategy.

The rapidly growing field of green hydrogen is linked to three of these investments, of which the largest is in H2 Energy, a Swiss-based company that was the first in the Western world to deliver hydrogen fuel cell trucks to commercial users and to create an ecosystem based on green hydrogen. H2 Energy's trucks are already in operation for large transporters and retailers in Switzerland, fuelled by green hydrogen generated by hydropower. The company, working in partnership with Hyundai, Linde and Alpiq, leases fuel-cell trucks to users and provides the necessary refuelling infrastructure.

Alongside Trafigura's investment in H2 Energy, the two companies have established a 50:50 joint venture, H2 Energy Europe, with the aim of investing in hydrogen trucking projects elsewhere in Europe. Its first focus is on developing a 1GW green hydrogen production facility in Esbjerg, Denmark, with the aim of supplying the Danish trucking market. The plant is expected to be operational by 2024-25 and to cost up to EUR1 billion.

The two other hydrogen-related investments are Hy2gen, a German-based developer of green hydrogen production facilities with a project pipeline of over 500MW of electrolysed capacity, and OneH$_2$, a provider of scalable hydrogen fuel production systems in North America currently focused on the forklift truck market. Hy2gen is working with Trafigura and Copenhagen Investment Partners to establish a project in Sauda, Norway, which will produce green hydrogen from hydropower in Norway and use it to produce green ammonia for use in the shipping industry.

Three further investments are in the following companies:

- US-based Quidnet Energy, which has developed a novel form of energy storage using geo-mechanical pumped storage technology to pump water under pressure into subsurface geological reservoirs. At times when variable renewable energy is not available, the water is released to drive hydroelectric turbines and power the electrical grid.
- UK-based Bboxx, a company that provides decentralised solar powered systems that enable access to cleaner energy for cooking in developing countries.
- Swiss-based Daphne Technologies, which provides innovative technology solutions to remove toxic and greenhouse gas emissions from fuel use in shipping. It can remove emissions such as sulphur oxides, nitrogen oxides and methane from the combustion gas of any fuel type, including heavy fuel oil, LNG, biofuels and ammonia.

Trafigura expects significant investment activity to continue in 2022, with at least four projects already in the pipeline for final investment decisions.

▼ H2 Energy green hydrogen refuelling point in Zurich, Switzerland.

Performance review

Shipping and Chartering

Trafigura Maritime Logistics operates as a shipping and freight service provider, securing competitive and reliable freight for in-house oil, metals and minerals traders and for third-party clients. The Wet and Dry Freight desks also function as profit centres in their own right.

Andrea Olivi
Head of Wet Freight
Shipping

Alan Cumming
Head of Dry Freight
Shipping

4,834

Shipping and Chartering fixtures
(2020: 4,225)

2021 Wet and Dry Freight activity

	Wet	Dry
Number of fixtures[1]	**3,608** (2020: 3,098)	**1,226** (2020: 1,127)
Average number of vessels under time-charter[2]	**175-190** (2020: 160-180)	**50-55** (2020: 40-45)

1. Approximately 65% of our wet cargo programme is on third-party owned ships.
2. A vessel on hire for more than three months (excludes LNG carriers).

▼ Trafigura's 2021-built dual fuel LPG vessel the Monte Rosa Explorer setting sail from Mokpo shipyard in South Korea.

Wet freight

2021 has truly been an *annus horribilis* for the global wet freight business, featuring the worst tanker earnings in at least 30 years due to unprecedented cuts in oil production, a growing fleet and rising bunker prices.

Trafigura's Wet Freight desk reduced its core long-term fleet and undertook a very aggressive hedging strategy, enabling us to manage what had been an historically large exposure for the company. As a result, the book was at times net short freight – a very rare occurrence. This strategy, together with a great team effort among support functions in offices spanning four continents, helped us to achieve a positive financial result well above initial expectations. We saw a significant increase in traded seaborne volumes, involving 3,608 wet fixtures and one of the world's largest oil company fleets in the world.

Once again, our bunkering joint venture TFG Marine was instrumental in ensuring we could optimise our bunkering operations, helping us to secure highly competitive bunker prices, with consistent quality across marine fuel grades supplied, in a period of rapidly inflating voyage expenses.

For a large part of the financial year, the Wet Freight desk was challenged by an oversupply in the market and low rates. However, it benefited from a temporary hiatus in the second quarter during the Suez Canal blockage, when we were able to step in to provide customers with alternative solutions for their disrupted supply chains.

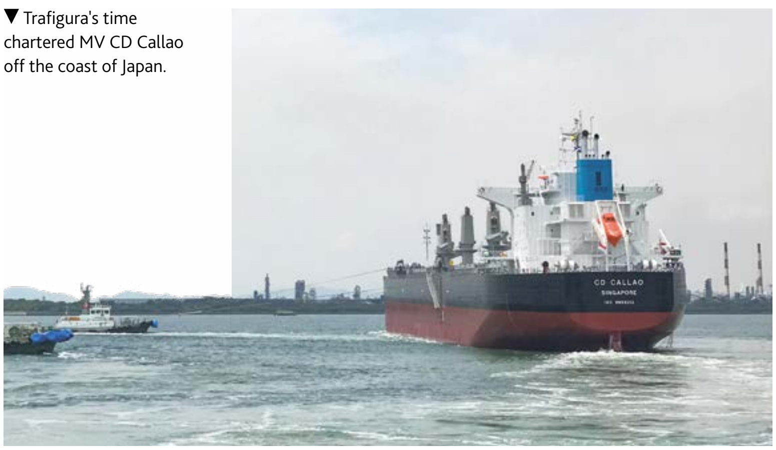
The one exception was the LPG market, where we saw owners achieving high earnings in December and January, with significant volatility throughout the first half of the financial year. Since then, the weaker market, reduced consolidation and a significant order book have changed the market landscape. Trafigura remains well positioned for 2022 and beyond to take advantage of these potentially challenging and uncertain markets.

The Wet Freight desk had a constructively busy year on the sale and purchase side and concluded more than 15 new-build and second-hand transactions across oil tankers and LPG carriers. Including this latest activity, the company has achieved close to USD5 billion in total executed asset transactions over the last five years.

Looking ahead, we remain sceptical that the market will recover significantly in 2022. Scheduled deliveries of new-build tankers remain high for next year and recycling activity has yet to pick up on a large scale. Nevertheless, we expect scrapping to accelerate as owners capitalise on high scrap values and charterers increasingly turn their focus to operating modern, more fuel-efficient vessels by 2023, when new environmental regulations begin coming into force. We believe there is potential for 2022 to be a busy period for mergers and acquisitions in the tanker industry, as firms either opt to go private or seek to merge to gain economies of scale.

Against this backdrop, we believe that the scale of our operations puts Trafigura in a unique position to enter joint ventures and cooperate with both cargo and tonnage operators in the market to improve earnings and drive decarbonisation within the tanker industry.

▼ Trafigura's time chartered MV CD Callao off the coast of Japan.



Dry freight

In dry freight, the year saw a strong rebound in cargo demand from 2020, but a severely disrupted supply picture, with continuing COVID-19-related delays resulting from quarantine measures and other restrictions on crew members, and slow port times as a result of stevedore and pilot shortages. Global congestion hit record highs and due to an extremely strong container market, we saw a large flow of habitual container traffic into bulk – all of which made for a robust bulk market this year. In addition, commodity flows underwent significant change thanks to sizeable arbitrage opportunities, which resulted in routes that were traditionally backhaul trades trading at parity to front haul – an unprecedented state of affairs. All of the relevant Baltic indices rose relentlessly from the beginning of the calendar year.

The Dry Freight desk had a strong year, despite the operational risk challenges created by constantly changing rules and regulations. Volumes rose from 37.4 million tonnes to 41.6 million in FY2021, of which 63 percent was from internal Trafigura business. Fixtures rose by nearly nine percent to 1,226, while profit more than doubled. The team was expanded to handle the increased demand and to help grow our third-party trading book. Two main priorities during the year were building our position on Indian Ocean routes with Supramax vessels and maintaining our position from the Pacific coast of Latin America in non-ferrous concentrates.

Looking forward, we believe that the immediate market outlook is strong, with the major risk to this view being an improvement in efficiency of fleet utilisation. Our main priority in the months ahead is maintaining our own operational efficiency by working with owners and customers to be a reliable partner whether buying or selling freight. We continue to trade in a complex COVID-19-impacted environment and with emissions regulation changes on the horizon, the year ahead is again set to be an interesting and challenging one.

Read more about our efforts and initiatives to decarbonise shipping: www.trafigura.com/products-and-services/shipping-and-chartering/

Trafigura's work to decarbonise shipping

The decarbonisation of shipping is an urgent and achievable goal. The industry is investing in energy efficiency, but shipping is still a considerable source of GHG emissions. The industry is investing in energy efficiency but it still contributes to over three percent of global GHG emissions. Without significant action, emissions from the sector are set to materially increase by 2050. Trafigura is committed to the transition to zero emissions shipping and our new decarbonisation target – **a 25 percent reduction in carbon intensity by 2030 against the 2019 IMO baseline across our entire chartering operation** – is a statement of our intent.

We are advocating for industry-wide action on shipping emissions and investing in new technologies and vessels to help achieve a more sustainable shipping industry. Trafigura is a member of the Getting to Zero Coalition, through which over 200 shipping industry participants have issued a Call to Action for rapid action from governments to decarbonise the sector. In September 2020, we published a whitepaper that called for a global carbon levy on maritime fuels to incentivise low-carbon innovation and we remain encouraged by the growing support for this proposal. Trafigura is also a founding member of the COP26-launched First Movers Coalition, which is focused on reducing emissions in key hard-to-abate industries. As part of its pledge to the First Movers Coalition, Trafigura has also committed to convert six vessels – 18 percent of its current owned fleet – to use zero-emissions fuels by 2030.

Other initiatives in which Trafigura is involved include co-sponsoring MAN Energy Solutions green ammonia two-stroke engine and co-funding studies focused on using green ammonia as a zero-emissions shipping fuel.

We are also investing in Hy2gen, a developer of hydrogen and e-fuels production technologies, and in Daphne Technologies, which is developing innovative technology to remove emissions such as nitrogen oxides, methane and carbon dioxide from the combustion gas of any fuel.

Performance review

Assets and investments

In 2021, strategic investments and alliances with carefully selected counterparties continued to further extend the scope of our activities and service offer.

The Group's industrial assets comprise majority-owned and operated mining operations and independently managed joint venture mines; the majority-owned but independently managed businesses Nyrstar and Puma Energy; Impala Terminals (which comprises a joint venture with IFM Investors and a number of other operations majority-owned by Trafigura); and the majority-owned bunkering provider joint venture TFG Marine. The Group also has an investment in H2 Energy, a leader in green hydrogen mobility solutions, and a 50 percent share of joint venture H2 Energy Europe. Galena Asset Management is Trafigura's wholly owned and regulated investment subsidiary. In addition, Trafigura holds a number of minority investments in industrial assets where it does not have operational control, including Vostok Oil, Terrafame and Prony Resources' Goro operation.

Mining

Trafigura Group's portfolio of mining assets span Africa, Latin America, North America and Europe. Equity value is generated for the Trafigura Group and commodities are procured for our metals and minerals trading books. The mining team also provides advisory and support services to the rest of the Group.

This was another challenging year for many of our mines – at least as challenging as 2020, and for the same reasons: labour shortages in North America and production shortfalls and supply chain disruptions caused by COVID-19. Fortunately, the increase in metals prices during the year compensated for the production losses, meaning that the mining assets reported a very solid financial result. However, the Group's safety record in mining remained unsatisfactory. Regrettably, four fatalities were recorded at mining operations during the financial year: one in Spain and three at Nyrstar's mine in Tennessee, US. Safety improvement plans are in place at each of these operations.

A key highlight of the year was the sale of Minas de Aguas Teñidas (MATSA), our Spanish polymetallic mining joint venture, to Australia's Sandfire Resources for USD1,865 million. The transaction was announced in September 2021 and is expected to be completed in the first half of 2022, with key conditions including Spanish foreign direct investment and anti-trust merger approval.

The sale was the culmination of significant investment in the MATSA mining complex by both Trafigura and Mubadala Investment Company to develop a world-class mining asset with a highly experienced workforce. As part of the sale agreement, Trafigura Group will retain a life of mine concentrate agreement for 100 percent of offtake from MATSA.

Other bright spots in 2021 included strong performance by the Catalina Huanca mine in Peru, where production, costs and organisation all significantly improved. Despite a very strong safety performance for the year under review, tragically a fatal incident occurred in November 2021 and a full investigation is currently underway.

The Mineração Morro do Ipê iron ore operation in Minas Gerais, Brazil, a joint venture between Mubadala and Trafigura, recorded very strong operational, safety and financial progress. The mining team provided support to the independently-managed Terrafame nickel operation, a joint venture between the Finnish State and Galena Asset Management, on the successful completion of a nickel sulphate plant at the site.

▼ MATSA mine in Huelva province in southwest Spain, which was sold this year.

However, at the same time, at many of our sites, the disruptions caused by COVID-19 were a daunting challenge. At several locations, up to 20 percent of the labour force was absent as a result of sickness or quarantine measures. Government measures to contain the spread of COVID-19 also disrupted supply chains, significantly delayed delivery of equipment, consumables and spare parts, and prevented staff from travelling to sites to help fix problems. Accelerated post-COVID-19 recovery in the wider economy also led to increased personnel turnover, in particular in North America.

The Castellanos zinc and lead mine, a joint venture between Cuban parastatal Geominera, who manages the mine and Trafigura, had a particularly difficult year, suffering a severe, COVID-19-related production shortfall. The Myra Falls mine, previously owned by Nyrstar, is still in ramp-up phase. Elsewhere, production at the Kapulo mine in the Democratic Republic of the Congo was disrupted by local political developments.

Therefore, the focus for the current year is firmly on improving safety performance and resuming stable operations as COVID-19-related measures are relaxed, operational stability should be restored. The mines should also benefit further from rising prices and demand for metals, although operating and capital costs are rising sharply, not least the price of energy. We continue recruiting additional suitably qualified personnel across the mining asset companies.

Nyrstar

Nyrstar is a global multi-metal smelting and mining business with a market-leading position in zinc and lead. This was Nyrstar's second full financial year as a consolidated part of the Trafigura Group. While the company's overall operations remained loss making during the year, as a result of difficulties arising from COVID-19, operating challenges linked to neglected investments pre-acquisition and rising energy prices, it remained a year of progress.

Since completion of its restructuring and acquisition by Trafigura Group, Nyrstar has been in turnaround mode with significant capital investment in operational improvement and modernisation, following years of underinvestment.

This continued during 2021, with capital expenditure of USD267 million invested across Nyrstar's global smelting operations and mining assets. Key objectives were to optimise the zinc smelters and our North American zinc mines to deliver their full potential, and to ramp-up redevelopment of the Port Pirie smelter in Australia to deliver improved profitability.

Regrettably, Nyrstar's operations in East Tennessee in North America recorded three fatalities during the financial year, the most recent of which, in July 2021, was caused by an internal rock fall. As an immediate response to this incident, the East Tennessee mine ceased work in all mines with high backs of 35 foot or higher and a new mining method is currently being implemented. Production levels are expected to ramp up to normal levels during FY2022.

In Australia, the company's smelting operations continued to face operating challenges, which resulted in lower than planned processed feedstock levels. This led to the recognition of an impairment loss of USD125 million.

However, in Europe, as a result of investments and various logistical and process improvements, Nyrstar sites were able to maintain production despite market disruptions caused by COVID-19. Also, as a result of sustainability initiatives, Nyrstar's European plants reported a reduction in carbon footprint and, in collaboration with Nala Renewables, constructed on-site renewable power and electricity storage facilities, providing green electricity to the national grids of their host countries, Belgium and the Netherlands. These activities underpinned Nyrstar's role as a responsible producer and reliable business partner with strong customer relationships and high-quality products, helping it to rebuild the customer base that had been eroded by the company's economic difficulties prior to its acquisition and restructuring by Trafigura.

Key highlights: Nyrstar green zinc

Since January 2021, all of the energy purchased by Nyrstar's Dutch smelter in Budel is generated from renewable sources, reducing greenhouse gas emissions to close to zero. Furthermore, plans are being implemented to expand the existing photovoltaic capacity at the site to create the largest solar park in the Netherlands.

At the twin Belgian smelting sites of Balen and Pelt, 50 percent of the energy purchased during 2021 was from renewable sources, and investment is underway in a EUR30 million lithium-ion battery energy storage system in Balen under ownership of Trafigura's joint venture Nala Renewables. This will contribute to the efficiency of the Belgian electricity grid.

In 2021, Nyrstar invested in greener and more efficient logistics by shifting freight operations from road to rail and barge. For example, working with a logistics partner, Budel by-products are now transported by train to Antwerp, eliminating 7,200 truck journeys annually.

In addition, Nyrstar improved the quality of the acid it produces in order to build profitable acid sales in-region rather than for export, further reducing transport miles and emissions.

▼ Construction of three wind turbines at Nyrstar's site in Pelt, Belgium, was completed in summer 2021.

Looking ahead to 2022, Nyrstar will continue to seek to stabilise production across its operations, although headwinds are increasing, in particular in the form of rising energy prices, which have already forced a curtailment of production at European sites after the end of the financial year. Investment in catch-up and sustainability projects are planned to continue and Nyrstar will continue to make investments (supported by Trafigura) with a view to increasing its annual zinc production and recurring EBITDA in 2022.

Puma Energy

Puma Energy is a leading emerging markets energy business, safely providing energy solutions in 41 countries across six continents. The company has around 2,000 retail sites, a presence at over 100 airports and a network of storage terminals operated under the infrastructure and downstream divisions. It creates value from supplying, distributing and delivering refined oil products, such as fuels, lubricants and bitumen as well as related retail activities and services. It benefits from quality supply at competitive prices through its arms-length commercial supply contracts with Trafigura.

The key event for Puma Energy in 2021 was its recapitalisation, which strengthened its balance sheet through a USD500 million rights issue, implemented by way of a convertible instrument. The rights issue was approved by Puma Energy shareholders in April 2021 and was completed on 30 September 2021, enabling the company to repay more than USD760 million of debt after obtaining the relevant regulatory approvals.

As a result, Trafigura's shareholding in Puma Energy increased to approximately 72 percent and Puma Energy was consolidated into Trafigura, effective Trafigura's financial year-end. Hadi Hallouche was appointed as CEO and René Medori re-appointed as Non-Executive Chairman.

The recapitalisation included the sale of Puma Energy's Angolan business to Sonangol for USD600 million and the acquisition by Trafigura of Sonangol's shares in Puma Energy for a similar amount. Completion of this transaction is subject to regulatory approvals and expected to close shortly after Trafigura's financial year-end. Completion will see Trafigura's shareholding in Puma Energy increase to around 93 percent.

Puma Energy is organised into four regions: the Americas, Africa, Asia-Pacific and Europe, and two segments: Infrastructure and Downstream, which manage the retail, commercial, aviation, refining and other businesses.

The company is focused on three priorities. First, it aims to simplify and reinvigorate its core business by investing strategically in downstream assets to grow market share. Second, it will prepare for the future of energy by continuing to help customers and communities secure access to affordable energy while helping to advance the transition to a lower carbon future. Third, it will work closely with Trafigura, increasing its competitiveness by leveraging Trafigura's energy market intelligence and expertise in supply chain optimisation.

An example of preparation for the future of energy is the installation of solar and battery projects on Puma Energy sites. Projects have already been completed at 43 retail and terminal sites with an installed capacity of 1,589KWp.

Puma Energy's results in 2020 and its performance in the first half of 2021 were significantly affected by COVID-19 and the resulting global economic downturn. The company's financial year runs to 31 December so annual figures are not yet available, but signs of improvement were evident by September, with good growth in the aviation business and a steady recovery in the downstream segment, especially in Latin America. Weaker global demand for bitumen, particularly in China and the US, had an impact on volumes and EBITDA. Safety remains a key priority and in this respect Puma Energy's performance was very good, recording a significantly lower lost-time injury frequency rate and no employee fatalities as at the end of its Q3.

Looking ahead to 2022, Puma Energy expects the recovery to gain momentum in many core sectors and approaches the new year on a much sounder financial footing to compete for business.

▼ Puma Energy is committed to providing high quality fuels to the communities where it operates.

Impala Terminals

Impala Terminals is a 50-50 joint venture with global investment management firm IFM Investors. Its primary focus is on the design, implementation, ownership and operation of multimodal logistics assets. This includes the safe, reliable transfer of dry and liquid bulk cargoes and containers to and from inland sites of production and consumption, through deep-sea ports. The Impala Terminals joint venture owns, manages and operates base metals terminals in Mexico, Peru and Spain; refined oil products storage and distribution in Paraguay and fluvial operations on the river Paraguay; multimodal transportation services in sub-Saharan Africa; and a global freight-forwarding business that provides global 24/7 coverage to its clients.

Separately, Impala Terminals also manages a number of Trafigura-owned port, logistical, storage and transportation assets that support Trafigura's commodity trading business and third-party trade flows in the Americas, Europe, the Middle East and Africa.

Globally, Impala Terminals has a total of 28 branded operations across 18 countries. These operations all performed at or above expectations during 2021, with limited disruption resulting from local challenges linked to COVID-19.

In 2021, the operations owned by the Impala Terminals joint venture successfully extended operations at major locations and diversified services to encompass a broader range of cargoes, including adding dry cargoes to the range of fluvial services offered on the Paraguay River. In Mexico, the company finished the construction of a new empty container terminal, a new laboratory and the installation of solar panels that will supply up to 50 percent of Impala Terminals Mexico's energy needs. In Peru, the company added to the range of the cargoes handled by opening a new general cargo site and a metals storage area which operates in conjunction with the mineral concentrate operation. In Spain, the company showed good growth from import volumes.

At the logistics business of the Impala Terminals joint venture, import volumes and container freight volumes rose strongly as the company increased its trade flows in a number of countries, in particular those in sub-Saharan Africa. The business also operated from new sites in Botswana and Durban and developed new paperless mobile technology for contractors and for its Peru and other South American operations in response to COVID-19 and to reduce environmental impacts.

Early in the year, the Impala Terminals joint venture launched a certified carbon-neutral freight service. The service provides its customers with transparent and accurate calculations of indirect greenhouse gas emissions generated by the transportation of shipments of non-ferrous metals and minerals by container. It also offers them the opportunity to offset residual emissions by providing funds to high-quality carbon finance projects around the world. All carbon neutral shipments are certified in accordance with the Carbon Neutral Protocol.

Impala Terminals' African assets in Zambia and the Democratic Republic of the Congo (DRC) had another busy year with increased bi-directional volumes on the back of an upturn in import flows as company sites in the region continued to exploit key synergies. Impala Terminals established additional warehousing capacity in Kolwezi in the DRC as a result of an increase in demand in the Copperbelt, while the development of rail and road services continued. During the year, Impala Terminals announced that it will be exiting the port of Dar es Salaam, after 11 years at the site, as it takes advantage of efficiencies at other locations nearby but just outside the port.

In Colombia, where Impala Terminals operates an inland port at Barrancabermeja and a barging operation from the Atlantic ports of Barranquilla and Cartagena, the company performed according to expectations despite the impact of COVID-19, economic uncertainty and social unrest. Record volumes of oil, dry and product cargoes were handled at Barrancabermeja and a record number of barges were discharged at Cartagena, with light crude oil a key growth market. In 2021, we signed an agreement to connect the Ecopetrol Refinery to the Impala Terminals infrastructure, while the company is also targeting greater integration with Puma Energy assets. The government's decision to proceed with the dredging of the Magdalena River, which is planned to commence in 2022, is expected to have a positive impact on the business.

In Chile, Impala Terminals' four sites, in Antofagasta, Arica, Copiapo and Coquimbo, performed well in the face of significant COVID-19-related headwinds, including the impact of the pandemic on the supply chain. Despite significant disruption to mining production in the country, the company handled increased volumes of concentrates in 2021. Some services were withdrawn at the Copiapo site while volumes handled increased at Antofagasta, with Impala Terminals targeting the expansion of its warehousing capacity at the latter. Going forward, development in Chile will also focus on contributing to company sustainable development plans.

▼ The new warehouse at Impala Terminals Middle East in Dubai.

In Bolivia, Impala Terminals posted a healthy performance in 2021. Operations at Oruro and Potosi both recorded growth for the year, benefitting from increased mining production in the region and the addition of new producers to its customer base. The company reported zero lost-time incidents in the country for the third year in a row.

At the Impala Burnside terminal in the US state of Louisiana, the company focused on diversifying activity, in particular targeting opportunities with third parties in renewable fuels, which is a long-term market for the business. At the end of 2021, Impala Terminals Burnside sold an option on a portion of land at Burnside to a major US industrial gas and chemical firm, which, if the option is executed as anticipated, plans to design, construct and operate a blue ammonia plant that would be operational by 2026. During the year, petroleum coke was the key commodity as coal volumes remained flat.

In Dubai, Impala Terminals Middle East reported strong performance for the year, with revenue, profit and volume all rising as the customer base was expanded. The company signed three new mid-to-long-term storage and container handling deals and created a solid forward-looking pipeline. This came despite the continued negative effects of the pandemic. The business grew its industry footprint and moved further into the e-commerce space, while looking ahead, it is considering opportunities in the region.

Impala Terminals continues to manage the challenges associated with climate change and the transition to low-carbon energy, while diversifying services and customers and growing its operations to take opportunities in an evolving marketplace. It will continue to measure and manage its emissions, in line with the Trafigura Group climate change strategy.

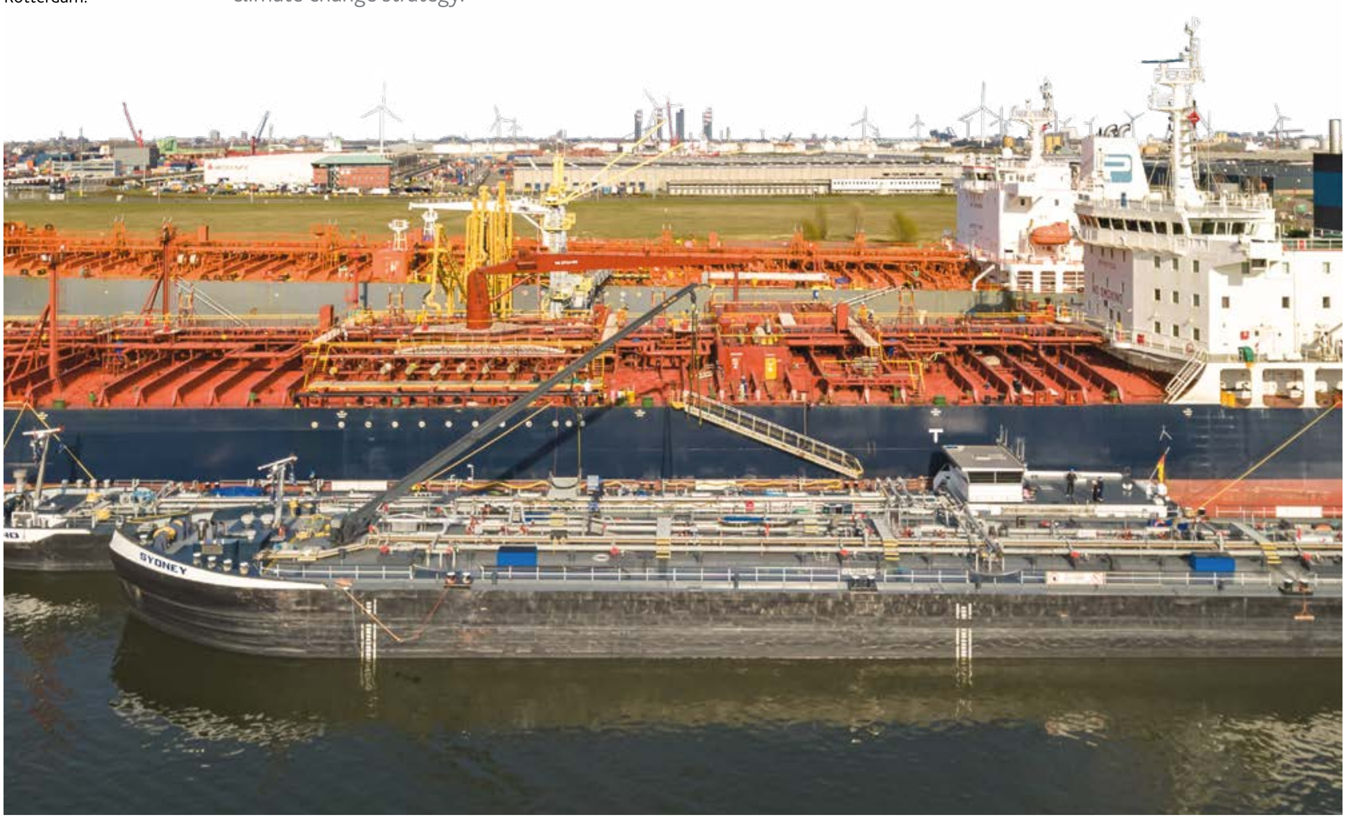
TFG Marine

TFG Marine is a joint venture between Trafigura and two of the world's largest shipowners, Frontline Ltd and Golden Ocean Ltd, founded in 2019 to serve the global bunker fuel market. We work closely with Trafigura's in-house trading and shipping teams to source and sell competitively priced fuels both to vessels under Trafigura time charter and to the wider shipping market.

The global tanker market provided a sombre backdrop in 2021, one of the toughest years on record for bunkering as a result of oversupply. However, TFG Marine made strong progress, increasing its footprint and volumes in all regions, to the point where it is already one of the top three physical bunker suppliers in the market. A key advantage is the strong financial backing of the Trafigura Group: in the current environment of rising oil prices, this has enabled TFG Marine to provide favourable payment terms to customers where some other suppliers have struggled to do so. During the year, TFG Marine more than held its own, even in the most challenging parts of the market, such as Africa and Singapore, and secured licences to enable further expansion in the European port complex of Amsterdam-Rotterdam-Antwerp, the Mediterranean and China.

The current bunker market is unsustainable, and 2022 is expected to be a year of accelerating consolidation, with players exiting the market for various reasons, including insufficient access to financial liquidity. The market is also becoming more transparent and more focused on managing the climate transition, with all the costs that will entail. For TFG Marine, this amounts to a unique opportunity to win business through innovation and the supply of alternative lower-carbon fuels and co-operation with other players, supported by an already strong brand, a solid financial position and a reputation for transparency.

▼ TFG Marine bunkering operation at the Port of Rotterdam.



Galena Asset Management

Galena Asset Management, Trafigura's wholly owned and regulated investment subsidiary, operates a number of funds investing in energy and mining and related assets. It offers third-party investors the opportunity to invest alongside Trafigura on an equal basis. The main focus of activity in 2021 was the Galena Multistrategy Fund, Galena's liquid hedge fund that trades a commodity macro strategy. The fund was up 82 percent for the Trafigura financial year, making it one of the best performing commodity hedge funds globally.

The fund was able to capitalise on the unique investment opportunities created in the macro and commodities space by the dislocations arising from COVID-19 and its aftermath – in particular the collision between a strong revival in demand for commodities and a more constrained supply response, coupled with substantial logistical bottlenecks. Our ability to leverage Trafigura's market intelligence was paramount. Particularly in this market environment, our ability to rely on market specialists with detailed and timely information enabled us to understand the underlying realities of the physical markets.

On the private equity side of Galena Asset Management's activities, substantial progress was made in Terrafame, a portfolio company of Galena Asset Management. Although Terrafame suffered delays as a result of the global pandemic, the company started producing nickel sulphate in its plant during the summer. Through this project, which has been financed by Galena Asset Management (among others), Terrafame is transitioning into one of the most efficient, low-carbon battery-grade nickel sulphate producers in the world.

For the year ahead, volatility is expected to continue as the structural factors driving it are far from being resolved, and record high energy costs are likely to act as a further source of economic instability. The resources sector in general and particularly the upstream oil industry are suffering from chronic low capital expenditures. The lack of new developments is a drag on the ability to meet growing demand. Galena Asset Management will launch a fund specialising in energy trade finance opportunities that will co-invest alongside Trafigura in opportunities in the upstream sector globally.

Minority investments

Vostok Oil

In December 2020, Trafigura acquired from Rosneft a 10 percent stake in the authorised capital of Vostok Oil LLC, a large-scale world class oil and gas project in the Krasnoyarsk territory of Russia. Trafigura is a passive minority investor in Vostok Oil with no operational or managerial control.

Vostok Oil holds 52 licence areas and 13 hydrocarbon fields. These hold six billion tonnes of high-quality, low-sulphur oil resources and around two trillion cubic metres of gas. Rosneft, the largest Russian oil company and the operator of Vostok Oil, has already started active development of the project which is expected to deliver up to 30 million tonnes of oil via the Northern Sea Route by 2024.

Implementing the project, Rosneft is committed to ensuring adherence to the highest environmental standards with the application of advanced technologies for environmental protection, from well drilling to the specialised design of oil pipelines and of tankers exporting produced oil. These are all geared to ensure that the project has a carbon footprint that is significantly lower than that of other major new oil projects in the world. Utilisation of associated gas production and year-round generation of wind power from the production site are also expected to contribute towards achieving this goal.

Trafigura and Rosneft have also agreed to conduct a joint study into ways of reducing CO_2 emissions. In October 2021, the companies signed a cooperation agreement to arrange an independent assessment of greenhouse gas emissions across Rosneft's crude oil supply chain. The companies will work together to secure an independent calculation of Rosneft's carbon footprint for delivery from production sites to three Russian export ports: Novorossiysk, Primorsk and Ust-Luga. Rosneft and Trafigura also stated that they intend to identify projects to reduce greenhouse gas emissions across the entire value chain of Urals crude oil.

▼ Vostok Oil, a large-scale world class oil and gas project in the Krasnoyarsk territory of Russia.

Guangxi Jinchuan

Guangxi Jinchuan is one of China's largest standalone copper smelters. Located in Fangchenggang in Guangxi province on the country's southern coast, it has a design capacity of 400,000 tonnes and operates with power-efficient and environmentally friendly double flash technology.

Trafigura has held a 30 percent stake in the Guangxi Jinchuan smelter since 2015, with the other 70 percent stake and operational control held by Jinchuan Group, one of China's largest copper producers. We are still the only international trading business with an equity investment in a substantial Chinese copper operation. Linked to our equity stake is a multi-year commercial agreement giving Trafigura the right to supply around 30 percent of Guangxi Jinchuan's concentrate feeding materials.

In 2021, the smelter showed a relatively rapid recovery from production issues it had experienced in 2020 as a result of COVID-19 and grew production to 465,000 tonnes. Profitability was similar to that in 2020, thanks to strong demand from cathodes consumption and sulphuric acid even through treatment and refining charges are lower than last year.

For 2022, we expect the copper market to remain tight, driving cathode premiums higher and further improving the profitability of Guangxi Jinchuan. Annual production is expected to rise further, to as much as 470,000 tonnes.

H2 Energy

H2 Energy Holding AG, based in Zurich, is a business developer of green hydrogen solutions and a unique provider of zero-carbon value chains for heavy duty transportation. In December 2020 it was announced that Trafigura would initially invest USD62 million, including a USD20 million capital injection into the company to support the development of a green hydrogen ecosystem for trucking in Switzerland, covering production, storage and distribution.

H2 Energy, founded in 2014, develops and operates hydrogen ecosystems, develops production sites for green hydrogen, engineers hydrogen refuelling stations and provides solutions for the storage and transport of hydrogen. H2 Energy has strong alliances with large industrial players and market leaders such as Hyundai, Alpiq and Linde, and is the first company in the Western world to deliver serial produced fuel cell trucks to commercial users. A total of 47 trucks are already in operation for large transporters and retailers in Switzerland with an additional 1,550 hydrogen fuel cell trucks on order for 2025.

The remainder of Trafigura's USD62 million capital investment is going into H2 Energy Europe, a newly established joint venture between H2 Energy and Trafigura that is aiming to replicate the successful Swiss model in other European countries, starting in Denmark. The company plans to build a 1GW green hydrogen production plant in Esbjerg, strategically located near the landing zone for Danish offshore wind power, to be operational by 2024.

▼ Production of copper cathodes at the Guangxi Jinchuan smelter.

Terrafame

Terrafame is a Finnish multi-metal company producing nickel, cobalt and zinc using environmentally sustainable bioheap leaching technology at its mine in Sotkamo, Finland. Trafigura's private fund management arm Galena Asset Management owns a 31 percent stake and state-owned Finnish Minerals Group is the majority shareholder with 67 percent. Trafigura Group has provided loan and equity finance to support the ramp up of Terrafame's production and the construction of a battery chemicals plant on-site.

Construction of the nickel sulphate plant has been completed, but later than planned as a result of COVID-19-related delays in obtaining key equipment. Completion of the plant is a milestone for Terrafame: it will substantially increase the company's sales and position Terrafame as a crucial supplier to the growing battery market for electric vehicles. Priorities for 2022 include stabilising operations at the nickel sulphate plant and accelerating its ramp up and making further progress in improving safety performance across Terrafame operations to industry-leading levels.

Emissions of greenhouse gases are becoming increasingly scrutinised in the resources industries, particularly for those assets supplying the electric vehicle value chain. Terrafame sits at the very low end of the carbon curve, with a carbon footprint under 10t CO_2/t Ni, which has prompted a lot of interest in its sulphate units from battery and car manufacturers. It is well positioned to meet growing global demand in general and growing demand in Europe specifically.

Goro Resources

In March 2021, Trafigura acquired a 19 percent interest in Goro Resources via its shareholding in Prony Resources New Caledonia (PRNC). Goro Resources is a significant nickel mining operation on the Pacific island and Prony Resources New Caledonia is a joint venture which includes investors, mine management, employees and local government and community organisations. PRNC has secured direct employment for more than 1,500 people and indirect employment for more than 10,000 inhabitants of New Caledonia.

Following the takeover, in April 2021, the facility was successfully restarted and ramped up to produce 3,000 tonnes of mixed hydroxide precipitate (MHP), meeting electric vehicle battery specifications in just three months. Strong market conditions for MHP intermediates, as a result of growing demand for electric vehicles, supported the decision to shift the facility from producing nickel oxide for stainless steel production to MHP for batteries. Other developments in 2021 included the successful management of the impact of COVID-19 on employees.

Priorities for 2022 include progressing with a tailings dry-stacking project to reduce tailings storage risk and protect the environment, which will further increase production, to at least 35,000 tonnes, and reduce cash costs.

▼ Prony Resources nickel and cobalt mine in New Caledonia.

Corporate governance

Board of Directors and Committees

Trafigura is owned by its senior employees. This alignment of employee and shareholder interest promotes sustainable financial performance with management depth and stability.

Board of Directors

The principal oversight body for the Group is the Board of Directors, which has overall responsibility for the strategic direction and management of the Group, including commercial and financing strategy and stakeholder relations. Members of the Board of Directors are listed on the opposite page.

The directors with executive responsibilities are also members of the Management Committee and subsidiary committees as outlined below. Management of the Group is characterised by short reporting lines, flat structures, clear delineation and segregation of responsibilities, and personal accountability.

Employee remuneration is linked to Group performance and individual contribution. The Group's circa 1,000 senior employees, in their capacity as shareholders, have a personal commitment to its long-term success, promoting management depth and stability and encouraging prudent risk management.

Board Sub-Committees

In September 2021, a new sub-committee focused on environmental, social and governance (ESG) risks and strategy was established to sit within the Board of Directors and the Management Committee, alongside the existing Audit, Compliance and the Nomination and Remuneration Committees.

The **ESG Committee** is chaired by the Group's Executive Chairman and Chief Executive Officer, along with one executive director and two non-executive directors. The new committee enables further Board-level engagement and input into the Group's material ESG risks and strategy.

The **Audit Committee** assists the Board of Directors in fulfilling its oversight responsibilities for the financial reporting process, the system of internal control the audit process.

The **Nomination and Remuneration Committee** assists and advises the Board of Directors on matters relating to the appointment and remuneration of the Executive Directors, the Management Committee and other senior employees of the Trafigura Group.

The **Compliance Committee** is responsible for ensuring that the company identifies and robustly implements all processes and controls necessary to implement compliance with all applicable laws and regulation as well as our Code of Business Conduct and supporting compliance policies.

Read our leadership biographies: www.trafigura.com/about-us/leadership

Management Committee

The eight-member Management Committee sits below the Board of Directors and includes Trafigura's three executive directors. The Management Committee is responsible for the execution of Trafigura's business strategy, including management of the day-to-day trading, commercial and operational functions and its investment portfolio.

Corporate Committees

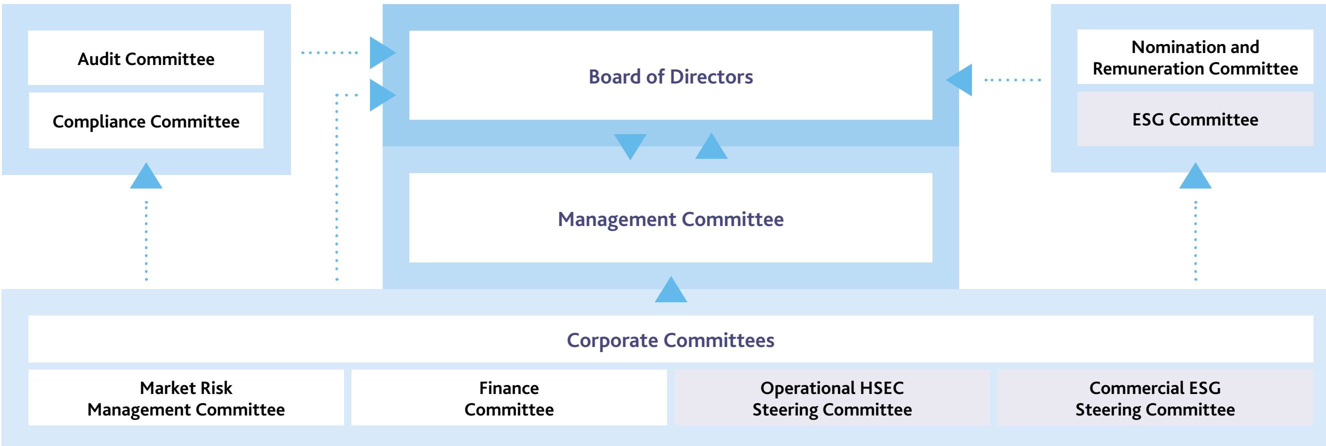
The Management Committee is supported by the four following corporate committees, illustrated on the facing page and described in further detail on page 42:

- **Market Risk Management Committee**
- **Finance Committee**
- **Operational HSEC Steering Committee**
- **Commercial ESG Steering Committee**

As part of our governance restructure, the Group's HSEC Steering Committee and Climate Change Group were dissolved and reformed into the Operational HSEC Steering Committee and the Commercial ESG Steering Committee.

These new steering committees, which separate operational health, safety, environment and community (HSEC) and commercial ESG issues, enable discussions to be more targeted, efficient and directly relevant to members and attendees. Each of the new steering committees are led by a member of the Management Committee to ensure that senior management is kept informed about and can engage with key HSEC and ESG issues relating to the Trafigura Group.

Corporate governance overview



Newly formed committees

Leadership

Board of Directors

Pierre Lorinet
Director

Andrew Vickerman
Director

Sipko Schat
Director

Mark Irwin
Director

Jeremy Weir
Executive Chairman and Chief Executive Officer

Mike Wainwright
Executive Director and Chief Operating Officer

Jose Maria Larocca
Executive Director and Co-Head of Oil Trading

Management Committee

Christophe Salmon
Group Chief Financial Officer

Ben Luckock
Co-Head of Oil Trading

Hadi Hallouche
Co-Head of Oil Trading and CEO of Puma Energy

Julien Rolland
Head of Power and Renewables Trading

Jesus Fernandez
Head of Mergers and Acquisitions

Risk management

How Trafigura manages risk

Trafigura operates in dynamic markets that involve a wide range of risk, whether operational, financial, political, social or environmental. A rigorous and conservative approach to risk management is therefore an integral element and central focus of Trafigura's business.

www.trafigura.com/brochure/trafigura-code-of-business-conduct

www.trafigura.com/brochure/trafigura-corporate-responsibility-policy

www.trafigura.com/brochure/trafigura-hsec-business-principles

Trafigura has developed rigorous risk management and governance systems to address the full range of risks to which it is exposed. These systems apply multiple lines of oversight to ensure compliance with all applicable laws and regulations, and a high standard of ethical behaviour by all employees at all times. The Group actively manages and mitigates, wherever possible, the identifiable or foreseeable risks inherent to its activity – for example, systematically hedging exposure to flat prices and extensively using insurance and credit-mitigating tools such as letters of credit.

The diversification of our business, trading a wide range of commodities with varying and uncorrelated market dynamics across a large number of countries and geographical regions, is an important factor in reducing the Group's overall exposure to any individual market, price, geopolitical or other risk. Unlike many financial assets, physical commodity markets provide many opportunities for risk diversification. The premium paid for copper in China, for example, has little to do with the pricing differential in LPG between the US and Europe.

By extending our trading capabilities, we are diversifying the business, resulting in lower overall exposure and higher risk-adjusted performance.

Board of Directors and Management Committee

The Management Committee and the Board of Directors directly oversee the trading divisions and operating companies. Trafigura has a flat corporate governance structure featuring short and direct channels of communication and control (see separate section on Governance on page 40).

The Board of Directors has principal oversight responsibility, sets the risk management framework, determines the overall risk appetite of the business and ensures that the appropriate structures and processes are in place to handle each category of risk in an appropriate manner.

The Management Committee is responsible for the day-to-day management of the Group's operations and investment portfolio and provides direct oversight of the Board's risk management strategy.

Further lines of oversight consist of a series of corporate functions that support the Management Committee in establishing policies and processes for managing different categories of risk, as well as providing analysis, advice and implementation support.

Compliance and responsible conduct

Trafigura's Code of Business Conduct, supporting Group compliance policies and our Corporate Responsibility Policy and Business Principles set out the high standards of responsible and ethical behaviour required of every employee, individually and collectively. Every employee receives a copy of the Code and applicable key policies, which includes mandatory training as a condition of employment.

Compliance Committee and Head of Compliance

Trafigura's Chief Compliance Officer oversees the implementation and development of the Group's compliance programme. They report to the Chief Operating Officer and the Trafigura Compliance Committee. The Compliance Department operates in partnership with the front office to ensure that our controls are relevant and effective. The Department works to continually improve its practices in an environment of evolving technology, regulations and stakeholder expectations. Our compliance training programme continues to expand, ensuring employee awareness of key external and internal requirements.

Market and price risks

Market Risk Management Committee and Chief Risk Officer

Trafigura systematically hedges all index price exposure incurred as a result of its trading activities within a framework set by the Board of Directors and implemented by the Market Risk Management Committee and the Chief Risk Officer (CRO).

The CRO reports directly to the Chief Operating Officer and chairs the Market Risk Management Committee, which includes company directors and senior traders. The Committee meets at least weekly to manage overall exposures, assess the impact of changing market dynamics and limit risk exposures and concentrations.

Trafigura's ongoing programme of investment in risk management systems includes a reporting system that automatically notifies the risk management and trading teams whenever a book nears its risk limits.

The CRO works proactively with trading teams to analyse changing market conditions and ensures that hedging strategies are focused on current market dynamics. Rigorous methodologies for managing market risk are used across the company. The CRO's risk team employs advanced statistical models that capture the non-normal dynamics that are an important feature of commodity markets.

The risk team focuses on aggregate risk, paying particular attention to term-structure and intra-commodity spreads. Risk concentrations are continuously reviewed in the context of changing market dynamics. The CRO manages strategic hedging activity dynamically to reduce risk concentrations and limit company-wide exposure.

Finance and credit risks

Finance Committee and Finance Department

The Finance Department supports the activities of the whole Group and is involved at the earliest stage of transactions and projects. Overseen by the Finance Committee, it is responsible for assessment of financial risk and has the capacity to veto any transaction.

Within Finance, the Credit Department's key role is to safeguard the balance sheet. It performs fundamental credit analysis, assessing credit risk associated with the Group's counterparts, setting internal limits, monitoring exposures and overseeing documentation.

Operational and ESG risks

ESG Committee, Commercial ESG and Operational HSEC Steering Committees

The newly-established Board ESG Committee provides Group direction for ESG policy and approach. As set out in the Governance section of page 40, the Committee promotes Board-level engagement with and input into the Group's material ESG risks and strategy.

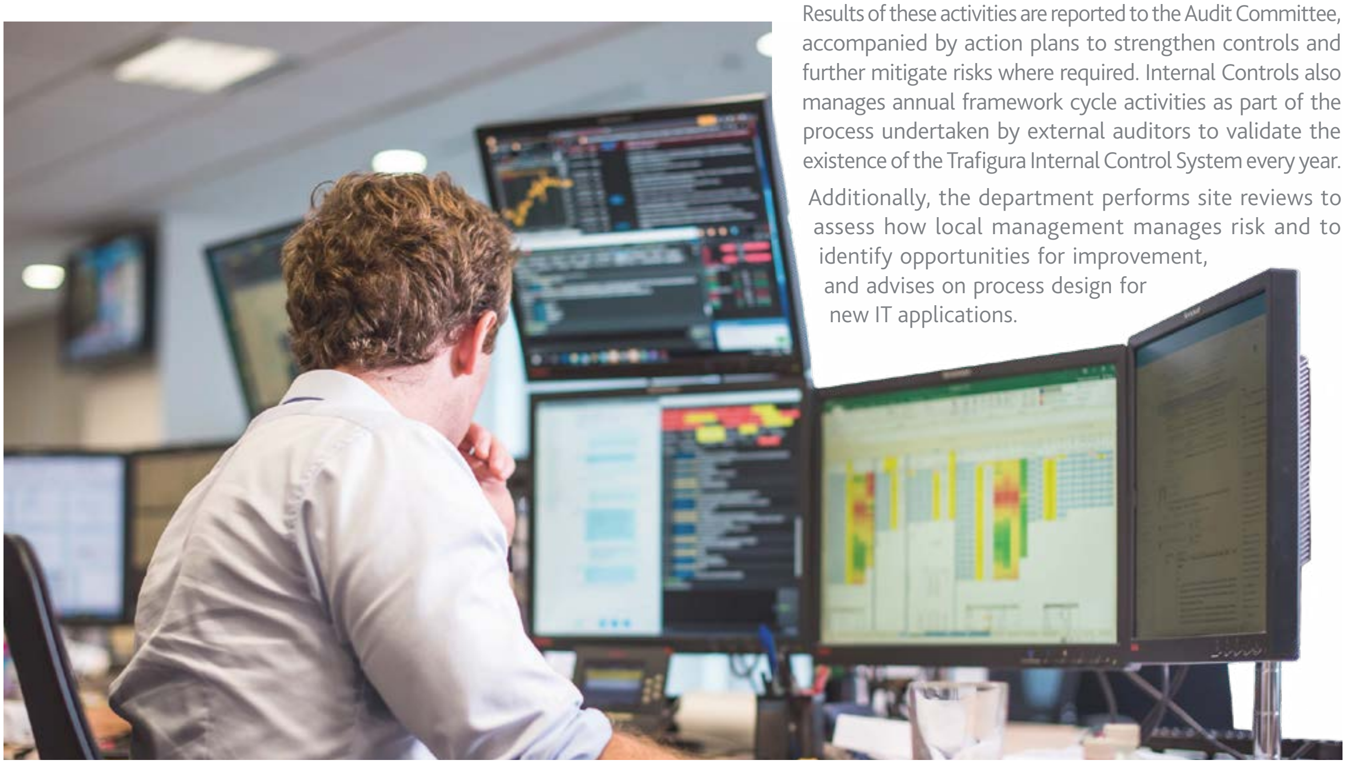
The Commercial ESG Steering and Operational HSEC Steering committees are mandated by the Board to promote best practice, oversee the management of environmental, social and governance (ESG) risks, and health, safety, environment, and community (HSEC) risks at the Group's operations and ensure that Trafigura's Corporate Responsibility Policy and Business Principles are adopted, appropriately adapted and implemented across the organisation.

Control risks

Audit Committee and Internal Controls Department

The Internal Controls Department supports management across the Group to continually assess risks and controls for governance, trading, IT and operational processes. Results of these activities are reported to the Audit Committee, accompanied by action plans to strengthen controls and further mitigate risks where required. Internal Controls also manages annual framework cycle activities as part of the process undertaken by external auditors to validate the existence of the Trafigura Internal Control System every year.

Additionally, the department performs site reviews to assess how local management manages risk and to identify opportunities for improvement, and advises on process design for new IT applications.



Risk Management System

KEY RISKS

Markets and prices

Volatility in commodity prices, spreads, interest and exchange rates.

Fluctuations in the supply of, or demand for, commodities that we trade.

Finance, liquidity and credit

Compliance, internal controls and sanctions

Legal, taxation and regulation

Changes in taxation arrangements in various territories.

Collateral effects of changes in financial regulatory frameworks.

MITIGATION AND ACTIONS

Markets and prices

- Trafigura's policy is to hedge all index price exposure related to physical transactions on a deal-by-deal basis.
- All stock is at all times either pre-sold or the index price is hedged.
- Despite such hedging, Trafigura remains exposed to basis risk, i.e., the risk of changes in the difference between the price of the commodity being hedged and the hedging instrument. The Group carefully monitors its hedging positions on a daily basis to avoid excessive basis risk resulting from these imperfect correlations.
- The majority of sales and purchases are denominated in US dollars. Exposure to other currencies is hedged as appropriate and financing raised in currencies other than US dollars is generally swapped into US dollars.
- Our policy is to borrow short-term working capital at floating rates, with any rate changes passed through to our customers, and to fix rates for medium- and long-term financing via the swaps market.
- Freight costs and bunker costs are hedged by our Shipping and Chartering Desk via forward freight agreements and bunker costs.

Finance, liquidity and credit

- Trafigura relies on a deep pool of financing from banks and investors to support its business. This infrastructure has three pillars:
  (i) Trade finance
  (ii) Securisation
  (iii) Unsecured committed revolving credit facilities
- For longer-term capital needs, we raise funds on public bond markets or through private placements with institutional investors. We follow a strict policy of matching the maturity of our assets and liabilities with longer-term assets supported by longer-term borrowings.
- We take a conservative approach to managing our funding liquidity, with more than one-third of committed facilities unutilised at all times under normal market conditions, and immediately available cash of at least USD500 million always on hand.
- Our transactional financing base allows the underlying assets to be entirely marked-to-market, matching liquidity needs for any related margin calls.

Compliance, internal controls and sanctions

- Trafigura's Compliance department oversees Group activities in partnership with front office functions to ensure that we operate appropriately and that our controls are relevant and robust. It focuses on promoting a sound compliance culture across the organisation in which everyone recognises their personal responsibility for meeting our compliance objectives. The team adopts a risk-based approach, allocating energy and resources to the issues that matter most to our core business and our stakeholders.
- The Department's activities include counterparty due diligence (KYC); anti-money-laundering; sanctions and trade restrictions; anti-bribery and corruption; and financial market conduct.
- The Group ensures that obligations with regard to international sanctions are respected across all our business activities and that we fulfil the undertakings on sanctions that we give as part of our credit facilities. This is a key focus for the trading desks, which receive support from the Compliance, Legal and Finance departments.

Legal, taxation and regulation

- Trafigura is focused on managing legal, taxation and regulatory risks across the multiple jurisdictions in which it operates. The Group adheres to all applicable local and international tax laws, including legislation on transfer pricing.
- We continue to follow the ongoing discussions surrounding the Organisation for Economic Co-operation and Development (OECD), Base Erosion and Profit Shifting (BEPS) Pillar One and Pillar Two blueprints. Once a concrete and final direction is determined, we will respond accordingly.
- We are also following closely the discussions about potential new forms of regulation that may be imposed on commodities trading firms. We have made representations to the appropriate authorities about the risks and unnecessary costs of introducing position limits in commodity derivatives markets and of imposing regulatory capital requirements on commodity trading firms.

KEY RISKS

Counterparty, country and credit

Operational and Environmental, Social and Corporate Governance (ESG)

Digital infrastructure/ cyber-security

MITIGATION AND ACTIONS

Counterparty, country and credit

- Trafigura uses internal credit limits established by the Credit department to reduce counterparty and credit risk. The Group prides itself on having had an extremely low incidence of credit losses throughout its history.
- Trafigura reduces political risk in relation to certain countries below a certain risk rating by purchasing political risk insurance.
- Credit limits reflect Trafigura's appetite for credit risk and are based on a credit analysis of the client as well as the size of the relevant transaction when compared to Trafigura's balance sheet.
- We pay particular attention to screening our portfolio of prepayment agreements with producers for credit risk.
- Trafigura manages certain exposure credit through coverage in the insurance or bank markets.

Operational and Environmental, Social and Corporate Governance (ESG)

- Our Corporate Responsibility Policy and Business Principles articulate the leadership team's priorities and commitments for social and environmental governance. At the operational level, they outline what is expected from everyone in the Group, its divisions and operating companies.
- Each division and operating company takes responsibility for and is required to supplement the Policy and Principles with relevant, sector-specific standards and procedures to manage the impacts of their operations.
- Operators are responsible for ensuring that industry, environmental, safety and internal policies and procedures are complied with at all times. Detailed procedure manuals are implemented throughout the Group and all operators receive regular training on environmental policies and legislation. This ensures that operators are kept up to date with procedural, legal, regulatory and industry changes.
- The Operational HSEC Steering Committee requires all divisions and operating companies to maintain a material risk register describing the key issues they need to manage and mitigate.
- All HSEC incidents are recorded and categorised for severity on Safeguard, the Group's HSEC data management system.
- Incidents registered as levels 4 and 5, involving significant spills or single or multiple fatalities, are investigated and the results and remedial actions are presented to the Operational HSEC Steering Committee.

Digital infrastructure/cyber-security

- Trafigura has invested significantly in state-of-the-art scalable and resilient systems residing on highly available and disaster recovery resilient infrastructure. Our applications are architected for front-to-back processing, with integrated controls and reporting.
- The commodities industry is a focus for sophisticated cyber threat actors ranging from nation states to high-tech criminal gangs. Motivations range from fraud to data theft. The impact of a breach in our corporate or industrial digital infrastructure has the potential to seriously disrupt our operations.
- To counter any cyber threat we actively manage the risk by deploying and continuously upgrading state-of-the-art cyber defences. We employ multiple layers of advanced threat detection mechanisms, together with active automated countermeasures. We run regular exercises in partnership with the most sophisticated industry specialists to test our detection and response capability to cyber-attacks.
- Management has paid particular attention to promoting a culture of security awareness. Cyber-security is a mandatory and on-going component of staff training, underpinned by a comprehensive set of defined Technology and Security Policies.

Funding model

Finance to meet diverse business needs

Our funding strategy matches sources of funding to financing requirements. We have developed diverse financing strategies that maximise scalability, flexibility and business resilience.

Continued access to capital

Trafigura's activities require substantial amounts of capital.

We source, store, blend and deliver commodities around the globe.

We invest in terminals, logistics and physical infrastructure to improve the efficiency of our trading operations.

Our diversified funding model allows us to continue to operate effectively and successfully in all market conditions. Its scalability and structure protects the business from market shocks and provides flexibility and the ability to capitalise on opportunities as they arise.

We have put in place a global programme of flexible, short-term facilities to finance our day-to-day operations and a programme of longer-term, corporate facilities to finance our asset acquisition and other corporate requirements.

Available funding exceeds our everyday requirements. This provides headroom for unusual market conditions. We also maintain substantial cash balances to ensure that we will always meet day-to-day capital commitments, even in unexpected circumstances.

Our approach to funding

Diversification improves competitiveness and access to capital

We diversify both the sources and the structure of our financing to minimise risk and maximise operational effectiveness.

We raise funds in a variety of markets in the US, Europe and Asia-Pacific. We have lending arrangements in place with 140 banks around the world. We are therefore not constrained by credit restrictions for specific financial institutions, sectors or regions.

We raise capital with a range of repayment schedules, from very short-term facilities to maturities greater than 10 years. This spreads our exposure across the yield curve.

Match-funded, collateralised lending reduces credit risk

As a matter of policy, we match the type of financing to the business requirement. We have established a three-pillar funding structure to put this into practice.

We use short-term financing for trading. These loans are secured against the underlying physical commodities. Lines are marked-to-market each week so the level of financing tracks the value of the underlying collateral as prices change. We raise longer-term debt to finance fixed assets and investments.

Transparency promotes stability

As a private company relying on debt to finance its operations, Trafigura's performance is closely scrutinised by a large group of banks and investors worldwide. We comply with the financial covenants attached to our syndicated bank facilities. Members of the finance team regularly meet with our lenders' representatives. These meetings often include operationally focused personnel (from Credit, Compliance and Trading Desks) who provide additional insight into our business model. As an issuer of publicly listed debt, we also meet the transparency requirements of our bond investors. Our interim and full-year reports are published online. We hold regular calls and presentations to update investors and to respond to specific queries directly.

Trafigura funding model

Transactional facilities

Securitisation programme

Corporate credit facilities

Our three-pillar funding structure

1. Transactional facilities

All transaction-based lending is fully collateralised. We fund day-to-day trading mostly through one-to-one (i.e. bilateral) agreements with individual banks and borrowing bases with syndicates of banks. Most transactions start with a bank issuing a letter of credit on behalf of Trafigura in favour of a commodity supplier to secure due payment. The bank takes security over the physical commodity being purchased. When payment is due, Trafigura draws on a transactional loan to pay the supplier, such loan being secured against the commodity. The loan is marked-to-market weekly until maturity so that the amount being financed always corresponds to the value of the underlying commodity.

Once the commodity is sold to the end-buyer, a receivable is created and assigned to the bank until the cash settlement is used to repay the secured loan. Alternatively, the loan can be repaid earlier if the receivable is sold to one of the trade receivables securitisation programmes sponsored by Trafigura.

2. Securitisation programme

Trafigura manages two trade receivables securitisation programmes through separately capitalised special purpose vehicles: TSF and Argonaut. The programmes further diversify Trafigura's funding sources and, thanks to TSF's investment-grade ratings from Moody's and S&P, are cost-effective financing mechanisms. Most trades are financed on a trade-by-trade basis with transactional secured loans, but Trafigura can fund an eligible receivable once an invoice has been issued by selling it to a programme. Securitising our receivables accelerates the rotation of existing credit lines, since transactional secured loans can be repaid faster with the programmes' proceeds.

3. Corporate credit facilities

Trafigura invests in fixed assets to support its trading activity. We finance these with long-term debt adhering to our policy of matching assets with liabilities. We issue debt securities and negotiate lending facilities in diverse markets. Funding sources include bonds, perpetual bonds, revolving credit facilities, private placements and term loans.

Public credit ratings

Trafigura does not hold a public rating and does not seek to obtain one. The Group focuses on strengthening its balance sheet through long-term value creation.

We obtain our funding from stakeholders who understand our business model in detail and whose investment decisions are not driven by ratings. We have significantly expanded our sources of financing over the years by maintaining a sustainable credit standing that is consistent with an investment-grade profile.

Likewise, the absence of a rating means that Trafigura's business and investment decisions are not taken on the basis of maintaining a particular rating level, something which becomes particularly important at times of high market volatility.

Trade financing example

to explain funding mechanism

	Purchase and sale agreements	Taking delivery from supplier	Transportation	Pricing and delivery to customer	Customer payment
Transaction component	**Day 1** Purchase and sale agreements	**Day 5** Taking delivery	**Days 6>19** Transportation	**Day 20** Pricing and delivery	**Day 50** Customer payment
Brent crude oil price	$60	$59	$55	$55	$60
Dubai crude oil price	$59	$59	$55	$55	$58
Physical trade	• Trafigura agrees to purchase 1 million barrels @ Brent minus $1/barrel, based on Brent price at delivery date • Trafigura asks a bank to issue an a letter of credit for $59 million to the benefit of the supplier, against sight of an acceptable contract, in order to guarantee payment to the supplier, using a **transactional credit facility** • Trafigura agrees to sell 1 million barrels @ Dubai plus $2/barrel, based on Dubai price at delivery • Transaction costs (interest cost, insurance, transport, storage, control, inspection, taxes, etc.) expected at $0.5 million	• Trafigura is invoiced $58 million by the supplier ($59-$1) x 1 million • Trafigura asks the bank to pay 95%* of cargo value (95% x $58 = $55 million) to supplier (and cancel letter of credit) against security over title of the cargo, using **transactional credit facility** • Trafigura draws the difference ($58-$55 = $3 million) from the **RCF** *percentage financed, depends on each transaction, usually 90-100%		• Trafigura invoices $57 million to customer ($55+$2) x 1 million • Trafigura sells the receivable (if eligible) to its receivables **securitisation programme** at face value, receiving payment of $57 million • Trafigura repays $55 million of the **transactional credit facility** • Trafigura uses remaining $2 million ($57-$55) to repay the **RCF** and build up **cash** • Trafigura pays $0.5 million transaction costs (interest cost, insurance, transport, storage, control, inspection, taxes, etc.) using **cash**	• **Securitisation programme** receives payment of $57 million from customer and repays funding
Hedging purchase leg	• Trafigura purchases 1 million barrels equiv. of Brent futures @ $60/barrel • Trafigura pays initial margin of $1 million using the **RCF**	• Trafigura sells 1 million barrels equiv. of Brent futures @ $59/barrel, paying net amount of $1 million using the **RCF** ($59-$60) x 1 million • Trafigura recovers $1 million initial margin and repays the **RCF**			
Hedging sale leg	• Trafigura sells 1 million barrels equiv. of Dubai futures @ $59/barrel • Trafigura pays initial margin of $1 million using the **RCF**		• Trafigura receives payment of $4 million (margin call) and repays the **RCF** ($59-$55) x 1 million	• Trafigura purchases 1 million barrels equiv. of Dubai futures @ $55/barrel • No further margin call since price stable • Trafigura recovers $1 million initial margin going to **cash**	
Transactional credit facility utilisation	59	55	55	–	–
Letter of credit utilisation	59	Cancelled	–	–	–
Drawn amount	–	55	55	Repaid	–
RCF utilisation	2	5	1	–	–
Drawn amount	1+1=2	2+3+1-1=5	5-4=1	Repaid	–
Securitisation utilisation	–	–	–	57	–
Drawn amount	–	–	–	57	Repaid
Cash position	–	–	–	1.5	1.5
Outstanding cash	–	–	–	1-0.5+1=1.5	1.5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Consolidated financial statements

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Report of the auditor
to the Shareholders and the Board of Directors
of Trafigura Group Pte. Ltd.

Report on the audit of the consolidated financial statements

Opinion

We have audited the consolidated financial statements of Trafigura Group Pte. Ltd. and its subsidiaries (collectively, the "Group"), which comprise the consolidated statement of income and consolidated statement of other comprehensive income for the year ended 30 September 2021, the consolidated statement of financial position as at 30 September 2021, the consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 30 September 2021 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those provisions and standards are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements" section of our report.

We are independent of the Group in accordance with the provisions of the International Code of Ethics for Professional Accountants (including International Independence Standards) of the International Ethics Standards Board for Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our audit approach

Overview

Overall Group materiality: USD 104'000'000

We performed full scope audit work at 6 components, audited specific balances at 36 components and performed specified procedures at 43 components. Our audit scope addressed approximately 77% of the Group's revenue and 80% of the Group's total assets.

As key audit matters the following areas of focus have been identified:

- Acquisition of Puma Energy Holdings Pte. Ltd. (Puma Energy)
- Acquisition of 10% participatory equity interest in Vostok Oil LLC
- LNG hedge accounting

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Context of our audit 2021

Trafigura Group Pte. Ltd. is one of the world's largest independent commodity trading and logistics companies. The Group trades operationally across different geographical locations around the world within two primary segments, Energy and Metals and Minerals, both of which are supported by the related shipping and chartering activities. The Energy segment also includes the downstream retail, power and renewables activities; whereas, the Metals and Minerals segment also encompasses mining, logistics and smelting businesses. The Group invests in terminals, storage warehouses, mines and other commodity-related assets, either directly or through equity stakes in joint ventures and associate companies over which they may have significant influence.

The Group's business is focused on commodity trade flows, including the transporting, storing and blending of a diverse portfolio of commodities to exploit natural arbitrage opportunities. To ensure the accurate capture of all the transactions for financial reporting, the Group relies on complex front-office trade and risk management systems with varying levels of integration, supported by manual reconciliations. The high volume of transactions and complexity of the systems heightens the risk of inaccurate or incomplete recording of transactions within the system. Minor errors, which repeat, could have a material impact on the consolidated financial statements.

As a part of designing our audit, we determined materiality and assessed the risks of material misstatement in the consolidated financial statements. In particular, we considered where management made subjective judgements, especially in respect of significant accounting estimates that involved making assumptions and considering the impact of future events that are inherently uncertain. In Note 5 Key accounting estimates and judgements, the Group describes the areas of key judgements made in applying accounting policies and the key sources of estimation uncertainty. Given the significant estimation uncertainty and the higher inherent risks of material misstatement, certain of these areas were also considered by us to be key audit matters and are described in more detail in the section 'Key audit matters' of this report. We also addressed risk of management override of controls, including among other matters, consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud. Furthermore, we evaluated and tested the design and operating effectiveness of the Group's controls over the accounting and financial reporting aspects within its trading operations, including the use of data analytics to assist in the testing of revenue (trade to cash) to identify nonstandard and more risky transactions.

Materiality

The scope of our audit was influenced by our application of materiality. Our audit opinion aims to provide reasonable assurance that the consolidated financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the consolidated financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall Group materiality for the consolidated financial statements as a whole as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements, both individually and in aggregate, on the consolidated financial statements as a whole.

Overall Group materiality	USD 104'000'000
How we determined it	Three-year average profit before tax
Rationale for the materiality benchmark applied	In our view, the materiality benchmark applied above is the measure against which the performance of the Group is most commonly assessed and is a generally accepted benchmark. We used a three-year average to allow for the volatility in earnings normally encountered in the commodity trading markets.

We agreed with the Audit Committee that we would report to them misstatements above USD 5'200'000 identified during our audit as well as any misstatements below that amount which, in our view, warranted reporting for qualitative reasons.

Audit scope

We tailored the scope of our audit in order to perform sufficient work to enable us to provide an opinion on the consolidated financial statements as a whole, taking into account the structure of the Group, the accounting processes and controls, and the industry in which the Group operates.

The Group financial statements are a consolidation of 430 legal entities that are accounted for in 738 financial ledgers, which we have defined as "components" for audit scoping purposes.

We identified 6 components that, in our view, required an audit of their financial information due to their size or risk characteristics. For these 6 components, the audit work was performed either centrally by the Group audit team in Switzerland or the Netherlands or by another PwC network firm at one of the Group's global service centres located in Mumbai, India or Montevideo, Uruguay under the direct guidance of the Group audit team. Additionally, we identified 44 components that, in our view, required either an audit of specific balances or specified procedures to be performed due to the significant or higher risk areas and to achieve appropriate coverage over material amounts. In addition, we identified another 35 components where we instructed a non-PwC network audit firm to report to us in relation to the business combination accounting and disclosures for the Puma Energy acquisition.

Of the 44 components unrelated to the business combination accounting and disclosures in relation to the Puma Energy acquisition, there were 13 components where the work was not performed directly by ourselves or through our direct supervision at the Group's global services centres, including 6 components where the work was performed by a non-PwC network audit firm. For these 13 components, we specified instructions and reviewed the results of their work with them for our audit. We determined the level of our involvement in the audit work performed by the component auditors to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the consolidated financial statements as a whole.

We ensured that the audit teams both at Group and at the component levels included the appropriate skills and competencies necessary for the audit of the Group's consolidated financial statements, including specialists in the areas of information technology, valuation and taxes. The Group audit team was in regular communication during the year with the local teams to discuss the audit approach, progress of the audit and observations or findings, if any. To facilitate our direct review, local PwC teams in India and Uruguay documented their audit work directly in the Group audit team's files. The Group audit team also performed further audit procedures over Group functions (including those relating to taxation, equity-based remuneration, valuation of certain non-current assets, litigation, consolidation and financial reporting disclosures). We also performed procedures focused on responding to the risk of fraud and non-compliance with laws and regulations.

Key audit matters

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

Acquisition of Puma Energy Holdings Pte. Ltd. (Puma Energy)

Refer to Note 7.1

Key audit matter	How our audit addressed the key audit matter
On 30 September 2021, the Group acquired control of Puma Energy Holdings Pte. Ltd. (Puma Energy), previously treated as an equity-accounted investee, through a series of linked transactions. The Group gained control of Puma Energy when it obtained a majority on Puma Energy's Board of Directors. The linked transactions also included both the purchase of a minority interest from Sonangol and the sale of Puma Energy's business in Angola to Sonangol for which anti-trust approval has not yet been received by Sonangol. The Group's expectation to receive this anti-trust approval in the first quarter of financial year 2022 was considered in determining the total purchase consideration and in arriving at a total 93.4% share ownership of Puma Energy under IFRS 3 Business combinations. The Group recorded a day 1 goodwill impairment of USD 88.4 million based on Management's estimate of Puma Energy's enterprise value in relation to the total goodwill of USD 1,081.5 million initially recorded for this transaction. The Group engaged a management's expert to perform a Purchase Price Allocation (PPA) analysis. The PPA is considered provisional as of the balance sheet date. This is considered a Key Audit Matter because of the key estimates and judgements in the PPA analysis which include the determination of purchase consideration and the estimated value of the assets and liabilities acquired that were derived from cash flow projections applying an applicable discount rate (also used to determine the enterprise value) and replacement cost estimates.	We met with management to gain an understanding of the transaction, operational factors and key judgments and assumptions used in the Purchase Price Allocation (PPA) analysis and enterprise value model. We issued instructions to the non-PwC network audit firm to report to us on financial information supporting the forecasted cash flows used in the PPA and valuation model and the assets and liabilities acquired. We performed a detailed review of the work performed by the non-PwC network audit firm. With the assistance of our internal valuation and accounting specialists, we performed the following procedures: • Assessed the appropriateness of the judgements used in determining the accounting treatment for the linked transactions, with particular consideration given to the pending anti-trust approval. • Obtained the report issued by management's expert and performed a detailed review of the work performed, including checking the appropriateness of the inputs, significant assumptions and methodology applied. • Checked relevant agreements and other documentation supporting the transaction. • Assessed the appropriateness of disclosures included in the consolidated financial statements. Based on the work performed, we were able to conclude that the significant judgements and estimates applied in the Puma Energy business combination were reasonable and appropriate.

Acquisition of 10% participatory equity interest in Vostok Oil LLC

Refer to Note 23.3.1

Key audit matter	How our audit addressed the key audit matter
In December 2020, the Group acquired a 10% participatory equity interest in Vostok Oil LLC through a wholly-owned Structured Entity (SE), and entered into other related contractual agreements, including supply contracts. As the SE is governed by an independent board of directors and the Group does not have the ability to direct the relevant activities, the Group does not consolidate the SE. The investment and the related agreements are treated as one unit-of-account, which is classified as a financial instrument at fair value through profit or loss and valued based on unobservable inputs. The Group assessed whether it has the power over the relevant activities of the SE, exposure to its variable returns and the ability to use this power to impact returns of the SE. This is considered a key audit matter because of the judgements required to assess the impact of complex contractual terms and underlying business rationale which determines the need to consolidate as well as the classification and valuation in the consolidated financial statements.	We obtained an understanding of the transaction, proposed structure and relationships to the Group (funding, supply agreements, governance structures) as well as its business rationale. We inquired of management to corroborate the representations being received and checked contracts, supply agreements and other documentation supporting Management's control assessment, classification and valuation. We further assessed the appropriateness of the fair value model and checked the appropriateness of the inputs used. We involved our financial reporting specialists to assist in our assessment of management's conclusions in reference to the IFRS guidance and to ensure we had considered all possible factors in this assessment. Based on the work performed, we were able to conclude that the significant judgements and estimates applied by Management were reasonable and appropriate.

LNG hedge accounting
Refer to Note 41

Key audit matter	How our audit addressed the key audit matter
The Group continues to use derivative financial instruments to hedge certain tolling, transportation and long-term liquefied natural gas ("LNG") off-take agreements. A net asset was recorded for these agreements totalling USD 2,452.6 million at 30 September 2021 which primarily relates to the LNG hedge relationship. USD 2,081.3 million was fair valued using unobservable inputs and categorised as Level 3 in the fair value hierarchy. The total hedge ineffectiveness recorded in the consolidated statement of income for the year ended 30 September 2021 was USD 62.4 million. The fair valuation of the hedged LNG agreements involves significant estimates, especially when the Group is required to use unobservable inputs, adopt market-based assumptions or make comparisons to similar instruments. These judgements become more significant in less liquid markets or for longer dated contracts. These fair valuations are calculated and managed manually. These cumulative factors are why this is considered a key audit matter.	We evaluated the Group's process and controls for capturing and reviewing the inputs into the fair value estimates, including the relevant IT systems. We included specialists directly in our team to evaluate management's approach to estimating the fair values and performed the following: • Assessed the reasonableness of management's assumption that there is no readily available LNG market to classify these arrangements as financial instruments under IFRS. • Verified the consistent application of the accounting treatment of LNG contracts across the hedged population. Where manual calculations were involved, we tested the mathematical accuracy of the models. • Verified the inputs into the price curves to external sources on a sample basis. • Assessed the appropriateness of disclosures included in the consolidated financial statements. Based on the work performed, we were able to conclude that the significant judgements and estimates used in the hedged item valuation were reasonable and appropriate.

Other information in the annual report

The Board of Directors is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements of the Group and our auditor's reports thereon.

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

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

Responsibilities of the Board of Directors for the consolidated financial statements

The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS as issued by the IASB, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

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

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

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

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

PricewaterhouseCoopers SA

/s/ TRAVIS RANDOLPH	/s/ EWA ANSELM-JEDLINSKA
Travis Randolph	Ewa Anselm-Jedlinska

Geneva, Switzerland

7 December 2021

Enclosure:

- Consolidated financial statements (consolidated statement of income, consolidated statement of other comprehensive income, consolidated statement of financial position, consolidated statement of changes in equity, consolidated statement of cash flows and notes)

A. Consolidated statement of income

	Note	2021 USD'M	2020* USD'M
Revenue	9	231,308.1	146,994.3
Materials, transportation and storage	10	(222,056.1)	(138,400.7)
Employee benefits	11	(1,233.7)	(1,261.1)
Services and other	12	(1,256.1)	(1,390.4)
Operating profit or (loss) before depreciation and amortisation	6	**6,762.2**	5,942.1
Depreciation (right-of-use assets)	13	(1,094.7)	(1,018.7)
Depreciation and amortisation (PP&E and intangible fixed assets)	13	(361.3)	(350.6)
Impairments (fixed assets)	14	(685.5)	(648.6)
Impairments (financial assets and prepayments)	14	2.9	(395.1)
Operating profit or (loss)		**4,623.6**	3,529.1
Share of profit/(loss) of equity-accounted investees	15	(110.8)	(327.0)
Disposal results and impairments of equity-accounted investees	15	(440.3)	(522.5)
Income/(expenses) from investments	15	88.5	(127.8)
Result from equity-accounted investees and investments		**(462.6)**	(977.3)
Finance income	16	405.9	500.1
Finance expense	16	(1,124.2)	(1,161.6)
Result from financing activities		**(718.3)**	(661.5)
Profit before tax		**3,442.7**	1,890.3
Income tax	17	(368.0)	(291.5)
Profit for the year		**3,074.7**	1,598.8
Profit attributable to			
Owners of the Company		3,100.0	1,699.2
Non-controlling interests	32	(25.3)	(100.4)
Profit for the year		**3,074.7**	1,598.8

* FY2020 has been restated to reflect the change in income statement presentation, refer to Note 2.6.

See accompanying notes.

B. Supplementary statement of income information

Reconciliation to Underlying EBITDA	Note	2021 USD'M	2020 USD'M
Operating profit or (loss) before depreciation and amortisation	6	**6,762.2**	5,942.1
Adjustments	18	105.2	130.3
Underlying EBITDA	18	**6,867.4**	6,072.4

See accompanying notes.

C. Consolidated statement of other comprehensive income

	Note	2021 USD'M	2020 USD'M
Profit for the year		**3,074.7**	1,598.8
Other comprehensive income			
Items that are or may be reclassified to profit or loss:			
Gain/(loss) on cash flow hedges	41	(105.1)	46.7
Effect from hyperinflation adjustment	44	13.7	12.8
Tax on other comprehensive income	17	8.7	18.3
Exchange gain/(loss) on translation of foreign operations		15.9	37.8
Share of comprehensive income/(loss) from associates		20.3	(146.4)
Recycling of currency translation reserve on acquisition of controlling stake in equity-accounted investee	7	716.0	–
Recycling of cash flow hedge reserve on disposal of equity-accounted investee		4.5	–
Items that will not be reclassified to profit or loss:			
Net change in fair value through other comprehensive income, net of tax	23	(13.7)	(34.3)
Defined benefit plan actuarial gains/(losses), net of tax		18.7	12.1
Other comprehensive income for the year, net of tax		**679.0**	(53.0)
Total comprehensive income for the year		**3,753.7**	1,545.8
Total comprehensive income attributable to:			
Owners of the Company		3,779.0	1,646.2
Non-controlling interests		(25.3)	(100.4)
Total comprehensive income for the year		**3,753.7**	1,545.8

See accompanying notes.

D. Consolidated statement of financial position

	Note	30 September 2021 USD'M	30 September 2020 USD'M
Assets			
Property, plant and equipment	19	4,828.6	3,430.2
Intangible assets	20	1,679.0	210.3
Right-of-use assets	21	2,408.1	2,091.5
Lease receivables	21	–	124.1
Equity-accounted investees	22	843.6	2,438.6
Prepayments	23	1,804.6	1,061.0
Loans receivable	23	362.4	694.4
Other investments	23	1,586.8	517.1
Derivatives	41	331.8	232.7
Deferred tax assets	17	265.7	124.3
Other non-current assets	24	903.6	192.0
Total non-current assets		**15,014.2**	11,116.2
Inventories	25	29,653.5	20,177.6
Trade and other receivables	26	24,748.1	15,245.1
Lease receivables	21	–	37.4
Derivatives	41	2,610.3	866.4
Prepayments	23	1,736.8	2,934.5
Income tax receivable	17	143.7	31.6
Other current assets	28	2,486.0	351.2
Deposits	29	460.0	466.0
Cash and cash equivalents	29	10,677.5	5,757.0
Total current assets		**72,515.9**	45,866.8
Assets classified as held for sale	30	2,535.6	2.6
Total assets		**90,065.7**	56,985.6

See accompanying notes.

	Note	30 September 2021 USD'M	30 September 2020 USD'M
Equity			
Share capital	31	1,503.7	1,503.7
Capital securities	31	1,173.9	1,097.7
Reserves	31	(289.5)	(965.4)
Retained earnings	31	7,914.8	5,923.3
Equity attributable to the owners of the Company		**10,302.9**	7,559.3
Non-controlling interests	32	257.0	230.6
Total group equity		**10,559.9**	7,789.9
Liabilities			
Loans and borrowings	33	10,911.2	7,070.1
Long-term lease liabilities	21	1,646.9	1,407.4
Derivatives	41	804.3	190.8
Provisions	34	449.9	371.5
Other non-current liabilities	35	551.8	722.0
Deferred tax liabilities	17	393.7	209.7
Total non-current liabilities		**14,757.8**	9,971.5
Loans and borrowings	33	34,269.8	25,783.5
Short-term lease liabilities	21	925.4	981.6
Trade and other payables	36	22,690.0	10,762.3
Current tax liabilities	17	648.0	249.1
Other current liabilities	37	1,430.1	807.6
Derivatives	41	4,323.2	640.1
Total current liabilities		**64,286.5**	39,224.2
Liabilities classified as held for sale	30	461.5	–
Total group equity and liabilities		**90,065.7**	56,985.6

See accompanying notes.

E. Consolidated statement of changes in equity

USD'000	Note	Share capital	Currency translation reserve	Revaluation reserve	Cash flow hedge reserve	Capital securities	Retained earnings	Profit for the year	Total	Non-controlling interests	Total Group equity
		Equity attributable to the owners of the Company									
Balance at 1 October 2020		1,503,722	(822,640)	(63,329)	(79,442)	1,097,692	4,224,202	1,699,139	7,559,344	230,642	7,789,986
Profit for the year		–	–	–	–	–	–	3,100,000	3,100,000	(25,300)	3,074,700
Other comprehensive income		–	756,051	(13,717)	(95,726)	–	32,434	–	679,042	–	679,042
Total comprehensive income for the year		–	756,051	(13,717)	(95,726)	–	32,434	3,100,000	3,779,042	(25,300)	**3,753,742**
Profit appropriation		–	–	–	–	–	1,699,139	(1,699,139)	–	–	–
Dividend	31	–	–	–	–	–	(1,116,685)	–	(1,116,685)	–	(1,116,685)
Recycling revaluation reserve to retained earnings FVOCI instruments		–	–	43,412	–	–	(43,412)	–	–	–	–
Acquisition of non-controlling interest in subsidiary		–	–	–	–	–	(4,442)	–	(4,442)	(207,368)	(211,810)
Share-based payments	11	–	–	–	–	–	104,877	–	104,877	–	104,877
Capital securities issued	31	–	–	–	–	400,000	(2,000)	–	398,000	–	398,000
Repayment of capital securities	31	–	–	–	–	(320,821)	(3,728)	–	(324,549)	–	(324,549)
Capital securities (currency translation)	31	–	–	–	–	(3,869)	3,869	–	–	–	–
Capital securities dividend	31	–	–	–	–	–	(82,713)	–	(82,713)	–	(82,713)
Reclassification		–	(12,799)	–	–	–	12,799	–	–	–	–
Share of other changes in equity of associates		–	–	–	–	–	(13,493)	–	(13,493)	–	(13,493)
Increase in non-controlling interest relating to acquisition of consolidated entities	7	–	–	–	–	–	–	–	–	250,428	250,428
Capital contribution from the minority shareholders		–	–	–	–	–	–	–	–	8,537	8,537
Other		–	–	(1,265)	–	862	3,922	–	3,519	–	3,519
Balance at 30 September 2021		1,503,722	(79,388)	(34,899)	(175,168)	1,173,864	4,814,769	3,100,000	10,302,900	256,939	**10,559,839**

USD'000	Note	Share capital	Currency translation reserve	Revaluation reserve	Cash flow hedge reserve	Capital Securities	Retained earnings	Profit for the year	Total	Non-controlling interests	Total Group equity
		Equity attributable to the owners of the Company									
Balance at 1 October 2019		1,503,722	(770,723)	(29,018)	(100,566)	1,073,792	3,928,066	871,731	6,477,004	327,684	6,804,688
Profit for the year		–	–	–	–	–	–	1,699,139	1,699,139	(100,368)	1,598,771
Other comprehensive income		–	(51,917)	(34,311)	21,124	–	12,143	–	(52,961)	–	(52,961)
Total comprehensive income for the year		–	(51,917)	(34,311)	21,124	–	12,143	1,699,139	1,646,178	(100,368)	**1,545,810**
Profit appropriation		–	–	–	–	–	871,731	(871,731)	–	–	–
Shares issued		–	–	–	–	–	–	–	–	188	188
Dividend	31	–	–	–	–	–	(585,987)	–	(585,987)	–	(585,987)
Acquisition of non-controlling interest in subsidiary		–	–	–	–	–	(8,027)	–	(8,027)	(607)	(8,634)
Share-based payments	11	–	–	–	–	–	130,291	–	130,291	–	130,291
Capital securities (currency translation)	31	–	–	–	–	20,273	(20,273)	–	–	–	–
Capital securities dividend	31	–	–	–	–	–	(80,687)	–	(80,687)	–	(80,687)
Share of other changes in equity of associates		–	–	–	–	–	312	–	312	–	312
Capital contribution from minority shareholders		–	–	–	–	–	–	–	–	3,745	3,745
Other		–	–	–	–	3,627	(23,367)	–	(19,740)	–	(19,740)
Balance at 30 September 2020		1,503,722	(822,640)	(63,329)	(79,442)	1,097,692	4,224,202	1,699,139	7,559,344	230,642	**7,789,986**

See accompanying notes.

F. Consolidated statement of cash flows

	Note	2021 USD'M	2020 USD'M
Cash flows from operating activities			
Profit before tax		3,442.7	1,890.3
Adjustments for:			
Depreciation	13	1,407.5	1,319.2
Amortisation of intangible assets	13	48.5	50.1
Provisions	34	(0.1)	53.6
Gain/(loss) on fair value through profit and loss instruments	15	(87.0)	128.1
Impairment (reversal)/losses on financial assets and prepayments	14	(2.9)	395.1
Impairment losses on fixed assets	14	685.5	648.6
Impairment losses on equity-accounted investees	14	26.3	524.2
Net finance costs	16	718.3	661.5
Share of (profit)/loss of equity-accounted investees	22	110.8	327.0
(Gain)/loss on sale of fixed assets		(7.1)	(5.7)
(Gain)/loss on sale of equity-accounted investees	15	414.0	(1.7)
(Gain)/loss on divestments of subsidiaries	15	–	0.8
Equity-settled share-based payment transactions	11	105.2	130.3
Operating cashflow before working capital changes		**6,861.7**	6,121.5
Changes in:			
Inventories		(8,591.8)	(6,744.1)
Trade and other receivables and derivatives		(13,593.2)	3,546.4
Prepayments		484.3	179.7
Trade and other payables and derivatives		15,594.2	(2,879.8)
Cash generated from/(used in) operating activities		**755.2**	223.7
Interest paid		(1,083.4)	(1,154.1)
Interest received		337.4	475.2
Dividends (paid)/received		164.3	4.9
Tax (paid)/received		(407.0)	(207.8)
Net cash from/(used in) operating activities		**(233.5)**	(658.1)
Cash flows from investing activities			
Acquisition of property, plant and equipment	19	(683.0)	(427.8)
Proceeds from sale of property, plant and equipment	19	270.1	95.1
Acquisition of intangible assets	20	(66.9)	(60.2)
Proceeds from sale of intangible assets		–	0.1
Acquisition of equity-accounted investees	22	(149.6)	(72.3)
Disposal of equity-accounted investees	22	57.5	28.8
Loans receivable and advances granted	23	(555.1)	(132.1)
Repayment of loans receivable and advances granted	23	50.3	2.1
Acquisition of other investments	23	(1,971.8)	(71.2)
Disposal of other investments	23	41.8	373.8
Acquisition of subsidiaries, net of cash acquired	7	278.8	–
Disposal of subsidiaries, net of cash disposed of		–	(0.8)
Net cash from/(used in) investing activities		**(2,727.9)**	(264.5)
Cash flows from financing activities			
Proceeds from the issue of capital securities	31	398.0	0.5
Payment of capital securities dividend	31	(73.5)	(73.2)
Dividend and payments in relation to the share redemption by the direct parent company	31	(1,095.2)	(586.0)
Repayment of capital securities	31	(324.5)	–
Proceeds from capital contributions to subsidiaries by non-controlling interests	32	8.5	3.7
Acquisition of non-controlling interest		(20.3)	(8.6)
Increase in long-term loans and borrowings	33	4,072.8	1,699.9
(Decrease) in long-term loans and borrowings	33	(16.4)	(1,906.6)
Net payment of leases	21/33	(1,044.8)	(999.0)
Net increase/(decrease) in short-term bank financing	33	5,977.3	2,281.7
Net cash from/(used in) financing activities		**7,881.9**	412.5
Net increase/(decrease) in cash and cash equivalents		**4,920.5**	(510.2)
Cash and cash equivalents at 1 October		5,757.0	6,267.2
Cash and cash equivalents at 30 September	29	**10,677.5**	5,757.0

See accompanying notes.

G. Notes to consolidated financial statements

1. Corporate information

The principal business activities of Trafigura Group Pte. Ltd. ('Trafigura' or the 'Company'), together with its subsidiaries (the 'Group'), are trading in crude oil and petroleum products, power and renewables, non-ferrous concentrates, refined metals and bulk commodities such as coal and iron ore. The Group also invests in assets, including through investments in associates, which have strong synergies with its core trading activities. These include storage terminals, service stations, metal warehouses, industrial facilities and mines.

The Company is incorporated in Singapore and its principal business office is at 10 Collyer Quay, Ocean Financial Centre, #29-01/05, Singapore, 049315.

The Company's immediate holding company is Trafigura Beheer B.V., a company incorporated in the Netherlands. Trafigura Beheer B.V. is ultimately controlled by Farringford Foundation, which is established under the laws of Panama.

The consolidated financial statements for the year ended 30 September 2021 were authorised for issue by the Board of Directors on 7 December 2021.

2. Basis of preparation

2.1 Statement of compliance

The Company's consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

2.2 Basis of measurement

The consolidated financial statements have been prepared under the historical cost convention except for inventories, derivatives and certain other financial instruments that have been measured at fair value. The consolidated financial statements have been prepared on a going concern basis.

2.3 No change in accounting policies for FY2021

The applied accounting principles applied in the preparation of the consolidated financial statements are consistent with those described in Trafigura's 2020 Annual Report.

Several IFRS amendments apply for the first time in FY2021. However, these do not materially impact the Group's consolidated financial statements.

For an overview of the estimated effect of issued, but not yet effective, new and amended IFRS standards and IFRICs on the Group, refer to Note 4 – Adoption of new and revised standards.

2.4 Functional and presentation currency

The Group's presentation currency is the US dollar (USD) and all values are rounded to the nearest tenth of a million (USD'M 0.1) unless otherwise indicated. The US dollar is the functional currency of most of the Group's principal operating subsidiaries. Most of the markets in which the Group is involved are USD denominated.

2.5 Going concern

Trafigura assessed the going-concern assumptions during the preparation of the Group's consolidated financial statements. The Group believes that no events or conditions, including those related to the COVID-19 pandemic, give rise to doubt about the ability of the Group to continue to operate in the next reporting period. This conclusion is drawn based on the knowledge of the Group, the estimated economic outlook and identified risks and uncertainties in relation thereto.

Furthermore, this conclusion is based on review of the current cash balance and expected developments in liquidity and capital. The Group has sufficient cash and headroom in its credit facilities. Therefore, it expects that it will be able to meet contractual and expected maturities and covenants. Consequently, it has been concluded that it is reasonable to apply the going-concern concept as the underlying assumption for the financial statements.

2.6 Change in statement of income presentation

In FY2021, the Group changed the presentation of the Consolidated Statement of Income from a classification based on the function of expense to a classification based on the nature of expense in order to provide a clearer analysis of the Group's financial performance. At the same time, performance monitoring by Group executive management also changed to an analysis based on the nature of expense method. The Consolidated Statement of Income and notes of the comparison period have been restated accordingly.

G. Notes to consolidated financial statements

Change from by-function to by-nature

Reconciliation from presentation based on a by-function classification to presentation based on a by-nature classification for the comparative period, financial year 2020, can be summarised as follows:

Financial year 2020	Revenue USD'M	Cost of sales USD'M	General and administrative expenses USD'M	Impairments of PP&E and intangible fixed assets USD'M	Impairments of financial assets and prepayments USD'M	Impairments of equity-accounted investees USD'M	Other income/ (expenses) – net USD'M	Share of profit/(loss) of equity-accounted investees USD'M	Finance income USD'M	Finance expense USD'M	Income tax expense USD'M	Profit for the year USD'M
Revenue	146,994.3	–	–	–	–	–	–	–	–	–	–	146,994.3
Materials, transportation and storage	–	(138,400.7)	–	–	–	–	–	–	–	–	–	(138,400.7)
Employee benefits (excluding SBP)	–	(488.1)	(773.0)	–	–	–	–	–	–	–	–	(1,261.1)
Services and other	–	(1,067.9)	(245.9)	–	–	–	(76.6)	–	–	–	–	(1,390.4)
Depreciation (right-of-use assets)	–	(40.1)	(978.6)	–	–	–	–	–	–	–	–	(1,018.7)
Depreciation and amortisation (PP&E and intangible fixed assets)	–	(193.0)	(157.6)	–	–	–	–	–	–	–	–	(350.6)
Impairments (PP&E and intangible fixed assets)	–	–	–	(648.6)	–	–	–	–	–	–	–	(648.6)
Impairments (financial assets and prepayments)	–	–	–	–	(395.1)	–	–	–	–	–	–	(395.1)
Share of profit/(loss) of equity-accounted investees	–	–	–	–	–	–	–	(327.0)	–	–	–	(327.0)
Impairments on and disposal results of equity-accounted investees	–	–	–	–	–	(524.2)	1.7	–	–	–	–	(522.5)
Income/(expenses) from investments	–	(6.5)	–	–	–	–	(121.3)	–	–	–	–	(127.8)
Finance income	–	–	–	–	–	–	–	–	500.1	–	–	500.1
Finance expense	–	(3.5)	–	–	–	–	–	–	–	(1,158.1)	–	(1,161.6)
Income tax	–	–	–	–	–	–	–	–	–	–	(291.5)	(291.5)
	146,994.3	(140,199.8)	(2,155.1)	(648.6)	(395.1)	(524.2)	(196.2)	(327.0)	500.1	(1,158.1)	(291.5)	**1,598.8**

Gross profit and underlying EBITDA

As a result of the change from by-function to by-nature, the consolidated financial statements no longer present gross profit as a separate subtotal and performance metric. As a replacement, the Group has introduced the operating profit before depreciation and amortisation subtotal and the underlying EBITDA metric. In an historical analysis of the period 2003 to 2020, both metrics show a similar development and trend as gross profit when analysing the financial performance of the Group, and therefore can be considered comparable to gross profit for financial analysis purposes.

Result from equity-accounted investees and investments

Within the subtotal 'result from equity-accounted investees and investments', all income line items have been combined relating to equity-accounted investees and investments.

3. Significant accounting policies

The Group's significant accounting policies are described in the relevant individual notes to the consolidated financial statements or are otherwise stated below.

3.1 Basis of consolidation

The consolidated financial statements include the assets, liabilities and results of operations of all subsidiaries and branch offices, which the Company, either directly or indirectly, controls. Control is achieved when the Group is exposed or has rights to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. When the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee.

Subsidiaries

Subsidiaries are consolidated from the date on which control is obtained by the Company and cease to be consolidated from the date on which control is transferred to a person or entity outside of the control of the Company. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

Changes in the Company's interests in subsidiaries that do not result in a loss of control are accounted for as equity transactions with any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received being recognised directly in equity and attributed to equity holders of the Company.

Non-controlling interests

Non-controlling interests in subsidiaries are identified separately from the Company's equity and are initially measured either at fair value or at the non-controlling interests' proportionate share of the fair value of the acquiree's identifiable net assets. Subsequent to acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. Total comprehensive income is attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Loss of control

If the Group loses control, the Group derecognises the assets and liabilities of the subsidiary, any non-controlling interests and the other components of equity related to the subsidiary. The parent's share of components previously recognised in other comprehensive income (OCI) is reclassified to profit and loss or retained earnings, as would be required if the Group had directly disposed of the related assets or liabilities. Any surplus or deficit arising on the loss of control is recognised in the Consolidated Statement of Income. If the Group retains any interest in the previous subsidiary, then such interest is measured at fair value at the date that control is lost. Subsequently it is accounted for as an equity-accounted investee or as an equity investment depending on the level of influence retained.

3.2 Current versus non-current classification

The Group presents assets and liabilities in the statement of financial position based on current/non-current classification. An asset is current when it is:

- Expected to be realised or intended to be sold or consumed in the normal operating cycle;
- Held primarily for the purpose of trading; and
- Expected to be realised within 12 months after the reporting period.

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in the normal operating cycle;
- It is held primarily for the purpose of trading; and
- It is due to be settled within 12 months after the reporting period.

The terms of the liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

The Group classifies all other liabilities as non-current. Deferred tax assets and liabilities are classified as non-current assets and liabilities.

3.3 Foreign currency

3.3.1 Foreign currency transactions

Subsidiaries, joint ventures and equity-accounted investees record transactions in the functional currency of the economic environment in which they operate. Transactions in currencies other than the functional currency of the subsidiary, joint ventures and equity investees are recorded at the rates of exchange prevailing at the date of the transaction.

Monetary assets and liabilities in currencies other than the functional currency are translated at the rates of exchange prevailing at the balance sheet date and gains and losses are reported in the Consolidated Statement of Income.

3.3.2 Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated to USD at exchange rates at the reporting date. The income and expenses of foreign operations, excluding foreign operations in hyperinflationary economies, are translated to USD at the average rate for the year which is considered as the best estimate of transaction dates. The resulting exchange differences are recorded in equity through other comprehensive income and are included in the Consolidated Statement of Income upon sale or liquidation of the underlying foreign operation.

Group entities with a functional currency being the currency of a hyperinflationary economy, first restate their financial statements in accordance with IAS 29, Financial Reporting in Hyperinflationary Economies (reference is made to 'Reporting in hyperinflationary economies' below). The related income, costs and balance sheet amounts are translated at the foreign exchange rate ruling at the balance sheet date.

3.3.3 Reporting in hyperinflationary economies

Refer to Note 44.

G. Notes to consolidated financial statements

4. Adoption of new and revised standards

4.1 New and amended standards or interpretations adopted

In the current year, the Group adopted the following new and amended standards or interpretations:

- Interest Rate Benchmark Reform – Phase 1 – amendments to IFRS 7 – Financial Instruments: Disclosures, IFRS 9 – Financial Instruments, and IAS 39 – Financial Instruments;
- Definition of a Business – amendments to IFRS 3 – Business Combinations;
- Definition of Material – amendments to IAS 1 – Presentation of Financial Statements, and IAS 8 – Accounting Policies, Changes in Accounting Estimates and Errors;
- COVID-19-related rent concessions – amendments to IFRS 16 – Leases; and
- Amendments to References to the Conceptual Framework in IFRS Standards.

Interest rate benchmark reform

The first phase of amendments provides temporary relief from applying specific hedge accounting requirements to hedging relationships directly affected by interbank offered rates (IBOR) reforms.

The reliefs had the effect that IBOR reform should not generally cause hedge accounting to terminate prior to contracts being amended. However, any hedge ineffectiveness continued to be recorded in the Consolidated Statement of Income.

IFRS 16 – COVID-19-related rent concessions

The IASB issued the COVID-19-Related Rent Concessions amendment to IFRS 16 Leases. The amendment provides relief to lessees from applying IFRS 16 guidance on lease modification accounting for rent concessions arising as a direct consequence of the COVID-19 pandemic. As a practical expedient, a lessee may elect not to assess whether a COVID-19-related rent concession from a lessor is a lease modification. A lessee that makes this election accounts for any change in lease payments resulting from the COVID-19 related rent concession the same way it would account for the change under IFRS 16, if the change were not a lease modification.

As a lessee, Trafigura has not obtained any lease concessions attributable to COVID-19. The amendments therefore do not have an impact on the Group's consolidated financial statements.

IFRS 3 – Business Combinations

In October 2018, the IASB issued amendments to IFRS 3 Business Combinations. These amendments, which resolve difficulties in determining whether an entity has acquired a business or a group of assets, are effective for business combinations with an acquisition date on or after 1 January 2020. From 1 October 2020, Trafigura applies the amended definition of a business for newly acquired business combinations. These amendments do not have an impact on the Group's consolidated financial statements.

IAS 1 and IAS 8 – Definition of Material

In October 2018, the IASB issued amendments to IAS 1 Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors. The amendments, which became effective on 1 January 2020, revise the definition of material and align the definition across other IFRS publications such as IFRS Standards and IFRIC Interpretations. These amendments do not have an impact on Trafigura's consolidated financial statements.

References to the Conceptual Framework in IFRS

In March 2018, the IASB issued the revised Conceptual Framework for Financial Reporting. The Conceptual Framework provides guidance for developing consistent accounting policies and assistance in understanding the standards. The changes in the Conceptual Framework may affect the application of IFRS in situations where no standard applies to a particular transaction or event. The revised Conceptual Framework came into effect on 1 January 2020. These amendments do not have an impact on Trafigura's consolidated financial statements.

4.2 New standards, amendments and interpretations not yet adopted

Certain new accounting standards and interpretations have been published that are not mandatory for the 30 September 2021 reporting period and have not been early adopted by the Group. Only the amendments to IFRS that are relevant for Trafigura are discussed below.

Amendments to IAS 1 – Presentation of financial statements – Classification of liabilities

The amendment to IAS 1 determining whether a liability should be classified as current or non-current has not yet been endorsed. The amendment is effective for annual reporting periods beginning on or after 1 January 2023 and is to be applied retrospectively. Trafigura does not expect that the amendments will have a material impact on the Group's consolidated financial statements.

Amendments to IFRS 3 – Business Combinations, IAS 16 – Property, Plant and Equipment, IAS 37 – Provisions, Contingent Liabilities and Contingent Assets and Annual Improvements to IFRS 2018–2020

These amendments were issued on 14 May 2020 and will come into force on 1 January 2022.

The amendments to IFRS 3 include an update of the reference to the Conceptual Framework in IFRS standards. Furthermore, an additional provision will be added to IFRS 3 stating that an acquirer must apply the provisions from IAS 37 and IFRIC 21 rather than the Conceptual Framework when identifying assumed liabilities within the scope of these standards. The content of the accounting rules for business combinations will not change.

The amendments to IAS 16 specify that income received by a company through the sale of items produced while the asset is being brought to its location and into working order must be recognised with the associated costs in profit or loss. Including these items in the cost of the asset is not permissible.

The amendments to IAS 37 pertain to the definition of the costs a company includes when determining if a contract will cause losses. Accordingly, settlement costs are all costs that would not be incurred without the contract (incremental cost) as well as other costs directly attributable to the contract.

The annual improvements to IFRS 2018–2020 pertain to amendments to IFRS 9 – Financial Instruments, whereby only such costs and fees which are paid to the lender by the Company and vice versa are to be included in the "10% test" for the purpose of derecognition of financial liabilities. Costs or fees paid to other third parties may not be included. Moreover, they pertain to minor amendments to IFRS 1 – First-Time Adoption of International Financial Reporting Standards, IAS 41 – Agriculture, and to the explanatory examples of IFRS 16 – Leases. Trafigura does not expect that the amendments will have a material impact on the Group's consolidated financial statements.

IFRS 17 – Insurance Contracts, including amendments to IFRS 17

On 18 March 2020, the IASB decided to postpone the date on which IFRS 17 will enter into force to fiscal years beginning on or after 1 January 2023. The amendment was issued on 25 June 2020. IFRS 17 was issued on 18 May 2017 and provides requirements on recognition, measurement and presentation of insurance contracts within the scope of the standard. IFRS 17 will replace IFRS 4. Trafigura does not expect that the amendment will have a material impact on the Group's consolidated financial statements.

Amendments to IAS 1 – Presentation of Financial Statements and IFRS Practice Statement 2 – Making Materiality Judgements

The amendments were issued on 12 February 2021. The amendments to IAS 1 – Disclosure of Accounting Policies – requires that only material accounting policies shall be disclosed in the Notes in the future. Accounting policy information is material if it relates to material transactions or events and there is a reason to consider materiality (for example, a change in accounting policy). The guidelines in IFRS Practice Statement 2 were accordingly adjusted. The amendments are to be applied in the fiscal year beginning on or after 1 January 2023. The effect on the reporting of Trafigura will be examined.

Amendments to IAS 8 – Accounting policies, changes in accounting estimates and errors

The amendments issued on 12 February 2021 clarify how entities can better distinguish between changes resulting from changes in accounting policies and changes in accounting estimates. For this purpose, accounting estimates are defined as "monetary amounts in financial statements that are subject to measurement uncertainty". The amendments are to be applied in the fiscal year beginning on or after 1 January 2023. The effect on the reporting of Trafigura will be examined.

Interest Rate Benchmark Reform – Phase II – Amendments to IFRS 9 Financial Instruments, IFRS 7 Financial Instruments: Disclosures, and IFRS 16 Leases

The amendments were issued by the IASB in August 2020 to provide practical expedients and reliefs in relation to modifications of financial instruments and leases that arise from transition from IBORs to risk-free rates. Phase II also provides further reliefs to hedge accounting requirements. These amendments would be effective for Trafigura from next financial year.

G. Notes to consolidated financial statements

5. Key accounting estimates and judgements

Preparing the consolidated financial statements in compliance with IFRS requires management to make judgements, estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

In the process of applying the Group's accounting policies, management has made various judgements. Those which management has assessed to have the most significant effect on the amounts recognised in the consolidated financial statements have been discussed in the individual Notes of the related financial statement line items.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, which have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are also described in the individual Notes of the related financial statement line items below. The Group based its assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

The Group has identified the following areas as being critical to understanding its financial position as they require management to make complex and/or subjective judgements and estimates about matters that are inherently uncertain:

- Useful life and residual value of property, plant and equipment (Note 13 – Depreciation and amortisation);
- Impairment tests (Note 14 – Impairments);
- Taxation (Note 17 – Income tax);
- Discount rates (Note 21 – Leases);
- Determining the term of a lease contract (Note 21 – Leases);
- Determination of control of subsidiaries and joint arrangements (Note 22 – Equity-accounted investees);
- Assets held for sale (Note 30 – Assets classified as held for sale and discontinued operations);
- Provisions (Note 34 – Provisions);
- Restoration, rehabilitation and decommissioning costs (Note 34 – Provisions); and
- Valuation of financial assets, including derivative and level 3 instruments (Note 41 – Hedging activities and derivatives).

6. Operating segments

Accounting policy

The segment reporting is in accordance with IFRS 8 Operating Segments. The segments reported reflect the reporting lines and structures used by the Group's Chief Executive Officer (CEO), who has been has been identified as the chief operating decision-maker (CODM), to allocate resources and assess the performance of Trafigura.

Operating segments have been aggregated if they have similar economic characteristics and are similar in the nature of products and services, production services, distribution methods and customer types or classes. In addition, aggregation has been applied for segments that do not merit disclosure by virtue of their size, based on a 10 percent threshold of combined revenue, profit or assets of all operating segments.

The accounting policies of the operating segments are the same as those described throughout the Notes where relevant. The Group accounts for inter-segment sales and transfers where applicable as if the sales or transfers were to third parties. Geographical data are presented according to the management view.

Segment assets, liabilities, income and results are measured based on our accounting policies and include items directly attributable to a segment, as well as those that can be allocated on a reasonable basis. Transactions between segments are conducted on an arm's length basis.

The Group's operating businesses are organised and managed separately according to the nature of the products, with each segment representing a strategic unit that offers different products and serves different markets. The reportable segments comprise:

- The Energy segment is engaged in oil and petroleum products, the Puma Energy activities, trading in power and renewables, and related freight activities. Oil and petroleum concerns sourcing, provision and storage of oil, at all stages from crude to finished products such as naphtha and gasoline. This includes the blending required to make gasoline in the various grades suitable for the different specifications relevant in different countries. Trading in power and renewables started up in FY2021 and has been included under the Energy segment. Operations are ramping up but not yet material.
- The Metals and Minerals segment trades copper, lead, zinc, aluminium, iron ore and coal in all forms, including ores, concentrates, and refined metals. There is involvement in all the various stages from mining through smelting to the finished metal. This segment also includes the Mining group and Nyrstar and Impala activities. In addition to the trading activities, the activities performed in this segment include the blending of metal concentrates, iron ore, coal and alumina, smelting of zinc and lead concentrates, and warehousing and transportation. The Metals and Minerals segment also includes related freight activities.
- All other segments include holding companies, securitisation programmes, group financing facilities and some smaller operating companies.

Information regarding the results of each reportable segment is included below. Performance is measured based on the segment's operating profit or loss before depreciation and amortisation. Management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Reconciliations of reportable segment revenues, results, assets and liabilities and other material items are as follows:

2021	Energy USD'M	Metals and Minerals USD'M	Corporate and Other USD'M	Total USD'M
Sales revenue from external customers	139,392.6	90,615.6	–	230,008.2
Service revenue from external customers	893.5	406.4	–	1,299.9
Revenue	140,286.1	91,022.0	–	**231,308.1**
Operating profit or (loss) before depreciation and amortisation	4,311.8	2,450.7	(0.3)	**6,762.2**
Depreciation (right-of-use assets)	(993.9)	(81.4)	(19.4)	(1,094.7)
Depreciation and amortisation (PP&E and intangible fixed assets)	(31.2)	(278.4)	(51.7)	(361.3)
Impairments (PP&E and intangible fixed assets)	(495.5)	(189.9)	(0.1)	(685.5)
Impairments (financial assets and prepayments)	11.4	(7.6)	(0.9)	2.9
Result from equity-accounted investees and investments	(968.3)	503.4	2.3	(462.6)
Result from financing activities				(718.3)
Income tax				(368.0)
Profit for the year				**3,074.7**

2020*	Energy USD'M	Metals and Minerals USD'M	Corporate and Other USD'M	Total USD'M
Sales revenue from external customers	82,107.1	63,043.9	–	145,151.0
Service revenue from external customers	1,573.4	269.9	–	1,843.3
Revenue	83,680.5	63,313.8	–	**146,994.3**
Operating profit or (loss) before depreciation and amortisation	4,687.8	1,254.2	0.1	**5,942.1**
Depreciation (right-of-use assets)	(927.1)	(72.0)	(19.6)	(1,018.7)
Depreciation and amortisation (PP&E and intangible fixed assets)	(29.8)	(266.0)	(54.8)	(350.6)
Impairments (PP&E and intangible fixed assets)	(131.2)	(516.0)	(1.4)	(648.6)
Impairments (financial assets and prepayments)	(337.0)	(53.5)	(4.6)	(395.1)
Result from equity-accounted investees and investments	(831.1)	(145.1)	(1.1)	(977.3)
Result from financing activities				(661.5)
Income tax				(291.5)
Profit for the year				**1,598.8**

30 September 2021	Energy USD'M	Metals and Minerals USD'M	Corporate and Other USD'M	Total USD'M
Segment assets and liabilities				
Equity-accounted investees	126.5	708.1	9.0	843.6
Other non-current assets	8,938.9	4,855.2	376.5	14,170.6
Net assets classified as held for sale	2,074.1	–	–	2,074.1
Total assets	45,522.5	33,561.0	10,982.2	90,065.7
Total liabilities	37,765.0	25,890.2	15,850.6	79,505.8
Other segment information				
Capital expenditure	340.7	340.9	68.4	750.0

30 September 2020	Energy USD'M	Metals and Minerals USD'M	Corporate and Other USD'M	Total USD'M
Segment assets and liabilities				
Equity-accounted investees	1,239.9	1,167.9	30.8	2,438.6
Other non-current assets	3,201.1	4,810.3	666.2	8,677.6
Net assets classified as held for sale	0.2	2.4	–	2.6
Total assets	21,308.7	29,472.8	6,204.1	56,985.6
Total liabilities	15,444.3	22,568.4	11,183.0	49,195.7
Other segment information				
Capital expenditure	116.6	309.6	64.3	490.5

*FY2020 has been restated to reflect the change in income statement presentation; please see Note 2.6.

Geographical information

Information about the geographical location of the Group's revenue from external customers is set out in the following table:

2021	Energy USD'M	Metals and Minerals USD'M	Total USD'M
Revenue from external customers			
Europe	41,488.5	17,980.4	59,468.9
Asia	41,759.2	51,808.1	93,567.3
North America	33,312.4	10,305.7	43,618.1
Latin America	13,666.5	1,497.9	15,164.4
Africa	4,534.4	3,540.4	8,074.8
Australia	651.4	913.0	1,564.4
Middle East	4,873.7	4,976.5	9,850.2
Total	140,286.1	91,022.0	**231,308.1**

2020	Energy USD'M	Metals and Minerals USD'M	Total USD'M
Revenue from external customers			
Europe	20,846.6	8,041.4	28,888.0
Asia	28,228.6	34,525.5	62,754.2
North America	20,813.5	11,887.2	32,700.7
Latin America	7,728.7	948.7	8,677.5
Africa	2,752.2	2,520.0	5,272.2
Australia	693.2	399.6	1,092.8
Middle East	2,617.6	4,991.3	7,608.9
Total	83,680.4	63,313.7	**146,994.3**

G. Notes to consolidated financial statements

7. Business combinations and non-controlling interests

Accounting policy

The Company accounts for its business combinations under the acquisition method at the acquisition date, which is the date on which control is transferred to the Group. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree. Transaction costs, other than those associated with the issue of debt or equity securities, which the Group incurs in connection with a business combination are expensed as incurred.

If a business combination is achieved in stages, any previously held equity interest is remeasured at its acquisition date fair value and any resulting gain or loss is recognised in the Consolidated Statement of Income except when measured at fair value through OCI. The remeasured stake is then considered in the determination of goodwill.

If the consideration transferred for a business combination exceeds the fair values attributable to the Group's share of the identifiable net assets, the difference is treated as goodwill, which is not amortised but is reviewed annually for impairment or when there is an indication of impairment. If a business combination results in a negative goodwill, the Group reassesses whether it has correctly identified and measured all assets acquired and all liabilities assumed. If the negative goodwill remains after the reassessment, it is recognised as a gain in the Consolidated Statement of Income.

Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity, then it is not remeasured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognised in the Consolidated Statement of Income.

7.1 Financial year 2021

Acquisition of Puma Energy

On 30 September 2021, through a series of linked transactions, the Group acquired control over Puma Energy Holdings Pte. Ltd. (Puma Energy), a non-listed company incorporated in Singapore. On this date, the Group obtained a majority in Puma Energy's Board of Directors. Following the conversion of debt into equity and purchase of shares from minority shareholders, the Group's shareholding increased from 55.5 percent as at 30 September 2020 to 72.8 percent as at 30 September 2021. Puma Energy's main activities include ownership and operation of storage facilities for and the sale and distribution of petroleum products. The Group acquired Puma Energy as part of recapitalising and strengthening Puma Energy.

One of the linked transactions, the acquisition of the Puma Energy shares held by Sonangol, has been signed in conjunction with another transaction, through which Sonangol will acquire Puma Energy's business in Angola for a consideration of USD600.0 million. Completion of this transaction is dependent on the approval of Sonangol's filing with antitrust authorities in Angola, which is expected to be received in the first quarter of financial year 2022.

As the amount payable to Sonangol is fixed and management expects approval to be received in the first quarter of financial year 2022, the (economic) risk and rewards of Sonangol's shares in Puma Energy economically increase the Group's share in Puma Energy to 93.4 percent, and this has been accounted as such in the business combination.

Goodwill

Goodwill of USD993.1 million was recognised on the acquisition, being the excess of the purchase consideration over the fair value of net assets acquired as set out below. The goodwill comprises the value of expected synergies from the acquisition, which is not separately recognised. Synergies will result from focus on three core areas: first, closer co-operation between Puma Energy and the Group. This will strengthen Puma Energy's competitiveness by leveraging the Group's energy market intelligence and expertise in supply chain optimisation. Second, the Group will reinvigorate Puma Energy's core business by investing carefully in downstream assets to grow market share. Finally, the Group will prepare Puma Energy for the future of energy and the transition to a lower carbon future.

None of the goodwill recognised is expected to be deductible for income tax purposes.

Fair value of net assets acquired

The fair values of the identifiable assets and liabilities of Puma Energy as at acquisition date were:

	Fair value recognised on acquisition USD'M
Assets	
Property, plant and equipment	1,691.4
Intangible assets	468.1
Right-of-use assets	620.5
Equity-accounted investees	51.4
Loans receivable	23.6
Other investments	34.2
Deferred tax assets	47.4
Other non-current assets	211.8
Total non-current assets	**3,148.4**
Inventories	
Inventories	884.1
Trade and other receivables	922.7
Prepayments	61.7
Income tax receivable	28.9
Other current assets	11.4
Cash and cash equivalents	322.0
Total current assets	**2,230.8**
Assets classified as held for sale	2,394.4
Total assets	**7,773.6**
Non-controlling interests	
Non-controlling interests	**184.0**
Liabilities	
Loans and borrowings	1,521.7
Long-term lease liabilities	418.0
Provisions	43.8
Other non-current liabilities	7.9
Deferred tax liabilities	330.6
Total non-current liabilities	**2,322.0**
Current tax liabilities	112.9
Loans and borrowings	787.8
Short-term lease liabilities	91.9
Trade and other payables	2,785.7
Other current liabilities	21.5
Total current liabilities	**3,799.8**
Liabilities classified as held for sale	461.5
Total liabilities	**6,583.3**
Fair value of net assets acquired	**1,006.3**

The Group measured the non-controlling interest balance at the non-controlling interests' proportionate share in the fair value of the Puma Energy's identifiable net assets.

The net assets recognised in the 30 September 2021 financial statements were based on a provisional assessment of their fair values, while the Group continued to work with independent valuators on determining more precise values for the acquired tangible and intangible fixed assets, and continued to evaluate certain deferred tax positions. These procedures were not completed by the date that the FY2021 financial statements were approved for issue by the Board of Directors.

Purchase consideration

The acquisition took place through a series of linked transactions, including:

- Conversion into equity of a convertible debt instrument issued under a rights issue (USD495.6 million);
- Acquisition of Puma Energy shares held by Sonangol (USD600.0 million); and
- Acquisition of Puma Energy shares held by minority shareholders (USD48.9 million).

In conjunction with the second linked transaction, Sonangol will acquire Puma Energy's business in Angola for a consideration of USD600.0 million on completion.

Upon obtaining control, the Group has remeasured its previously held equity investment in Puma Energy based on a fair value assessment, i.e. assessing Puma Energy's enterprise value based on a discounted cash flow model. The resulting loss of USD79.7 million has been recognised in the Consolidated Statement of Income within disposal results of and impairments on equity-accounted investees. Measurement took place on the basis of a fair value assessment of Puma Energy as the Group determined that the consideration paid in the transactions was not the most suitable basis to determine the fair value of acquiree.

Based on the same fair value assessment, the Group concluded that it could not justify as goodwill the full balance of the excess of the purchase consideration over the fair value of net assets acquired. Therefore, it recognised a portion of the excess as a day 1 goodwill impairment (USD88.4 million), which has been recognised in the Consolidated Statement of Income within impairments of intangible fixed assets. The remaining goodwill balance can be supported by the fair value measurement. Refer to Notes 14 and 20.

Transaction costs of USD6.2 million were recognised in the Consolidated Statement of Income within services and other.

Based on the above, the goodwill has been computed as follows:

	USD'M
Consideration (including rights issue)	1,144.5
Fair value existing stake	876.8
Non-controlling interest	66.5
Purchase consideration	**2,087.8**
Fair value of net assets acquired	(1,006.3)
Initial computed goodwill	**1,081.5**
Day 1 goodwill impairment	(88.4)
Goodwill arising on acquisition	**993.1**

FCTR balance

Due to the business combination, the Group is required to recycle to the Consolidated Statement of Income the remaining foreign currency translation balance on its previously held equity investment in Puma. The resulting loss of USD716 million has been recognised in the Consolidated Statement of Income within disposal results of and impairments on equity-accounted investees. The loss has been offset by an equal and opposite effect of this recycling in the Consolidated Statement of Other Comprehensive Income. As a result, the overall impact on equity is nil.

Analyses of cash flows on acquisition

The cash flows generated upon acquisition are detailed in the below table:

	USD'M
Cash acquired with the subsidiary	322.0
Cash paid to previous owners	(43.2)
Net cash flows upon acquisition	**278.8**

The difference between the consideration and the cash paid to previous owners is the convertible debt instrument, which converted into equity, and (deferred) amounts payable.

7.2 Financial year 2020

There were no significant acquisitions of subsidiaries and non-controlling interest during the financial year ended 30 September 2020.

8. Deconsolidation of subsidiaries

There were no significant deconsolidations of subsidiaries and non-controlling interest for the financial years ended 30 September 2021 and 30 September 2020.

G. Notes to consolidated financial statements

9. Revenue

Accounting policy

Revenue recognition

Revenue is derived principally from the sale of goods and in some instances the goods are sold on Cost and Freight (CFR) or Cost, Insurance and Freight (CIF) Incoterms. When goods are sold on a CFR or CIF basis, the Group is responsible for providing these services (shipping and insurance) to the customer, sometimes after the date at which the Group has lost control of the goods. Revenue is recognised when the performance obligations have been satisfied, which is once control of the goods and/or services has transferred from the Group to the buyer.

Revenue is measured based on consideration specified in the contract with a customer and excludes amounts collected on behalf of third parties. The same recognition and presentation principles apply to revenues arising from physical settlement of forward sale contracts that do not meet the own use exemption. Revenue related to the sale of goods is recognised when the product is delivered to the destination specified by the customer, which is typically the vessel on which it is shipped, the destination port or the customer's premises, and the buyer has gained control through their ability to direct the use of and obtain substantially all the benefits from the asset. Where the sale of goods is connected with an agreement to repurchase goods at a later date, revenue is recognised when the repurchase terms are at prevailing market prices, the goods repurchased are readily available in the market, and the buyer gained control of the goods originally sold to them. Should it be determined that control has not transferred or the buyer does not have the ability to benefit substantially from ownership of the asset, revenue is not recognised and any proceeds received are accounted for as a financing arrangement.

For certain commodities, the sales price is determined on a provisional basis at the date of sale as the final selling price is subject to movements in market prices up to the date of final pricing, normally ranging from 30 to 90 days after initial booking (provisionally priced sales). Revenue on provisionally priced sales is recognised based on the estimated fair value of the total consideration receivable. The revenue adjustment mechanism embedded within provisionally priced sales arrangements has the character of a commodity derivative. Accordingly, the fair value of the final sales price adjustment is re-estimated continuously. In all cases, fair value is estimated by reference to forward market prices.

Revenue related to the provision of shipping- and insurance-related activities is recognised over time as the service is rendered.

	2021 USD'M	2020 USD'M
Sales of goods	230,008.3	145,151.0
Rendering of services	1,299.8	1,843.3
Total	**231,308.1**	146,994.3

10. Materials, transportation and storage

Accounting policy

Materials, transportation and storage includes purchases of commodities and material, and the associated costs of purchasing, storing and transporting the products. It also includes the change in mark-to-market valuation of inventories, all derivatives and forward contracts.

	2021 USD'M	2020 USD'M
Energy	135,181.7	78,045.5
Metals and Minerals	86,874.4	60,355.2
Total	**222,056.1**	138,400.7

11. Employee benefits

Accounting policy

Short-term employment benefits

Wages, salaries, social security contributions, annual leave and sickness absenteeism, incentives and non-monetary benefits are recognised in the year in which the associated services are rendered by employees.

Post-employment benefits

Pensions and other post-employment benefits are accrued in the period in which the associated services are rendered by employees of the Group. The cost of providing benefits under the defined benefit plans is determined separately for each plan using the projected unit credit method. Unvested past service costs are recognised as an expense on a straight-line basis over the average period until the benefits become vested. Past service costs are recognised immediately if the benefits have already vested immediately following the introduction of or changes to a pension plan.

When a settlement (eliminating all obligations for benefits already accrued) or a curtailment (reducing future obligations as a result of a material reduction in the scheme membership or a reduction in future entitlement) occurs, the obligation and related plan assets are remeasured using current actuarial assumptions and the resultant gain or loss is recognised in the Consolidated Statement of Income during the period in which the settlement or curtailment occurs.

The interest element of the defined benefit cost represents the change in present value of scheme obligations resulting from the passage of time, and is determined by applying the discount rate to the opening present value of the benefit obligation, taking into account material changes in the obligation during the year. The expected return on plan assets is based on an assessment made at the beginning of the year of long-term market returns on plan assets, adjusted for the effect on the fair value of plan assets of contributions received and benefits paid during the year. Actuarial gains and losses are recognised in full within other comprehensive income in the year in which they occur.

The defined benefit pension plan surplus or deficit in the Statement of Financial Position comprises the total for each plan at the present value of the defined benefit obligation (using a discount rate based on high-quality corporate bonds), less the fair value of plan assets out of which the obligations are to be settled directly. Fair value is based on market price information and, in the case of quoted securities, is the published bid price. Contributions to defined contribution schemes are recognised in profit or loss in the period in which they become payable.

Employee share incentive plan and employee share trust

Employees of the Group receive remuneration in the form of shares of the immediate holding company Trafigura Beheer B.V. as consideration for services rendered. This is considered an equity settled share scheme as the Company neither has a present legal or constructive obligation to settle in cash, nor has a past practice or stated policy of settling in cash.

The cost of the equity-settled transactions is measured at fair value at the grant date taking into account the terms and conditions upon which the shares were granted. This fair value is expensed over the vesting period with a corresponding credit to equity. For shares that immediately vest, the fair value is expensed in the accounting period corresponding to the date of grant.

11.1 Employee benefits

	2021 **USD'M**	2020 USD'M
Salaries and bonuses	1,007.8	1,044.6
Social security costs	86.2	66.2
Pension costs	34.5	20.0
Subtotal	**1,128.5**	1,130.8
Shared-based payments	105.2	130.3
Employee benefits	**1,233.7**	1,261.1

The average number of employees split by segment and geography is as follows:

2021	Energy FTE	Metals & Minerals FTE	Corporate and Other FTE	Total FTE
North, Central and South America	1,119	2,730	303	**4,152**
Europe and Africa	287	1,896	263	**2,446**
Asia, Middle East and Australia	302	1,663	468	**2,433**
Total	1,708	6,289	1,034	**9,031**

2020	Energy FTE	Metals & Minerals FTE	Corporate and Other FTE	Total FTE
North, Central and South America	1,054	2,635	291	3,980
Europe and Africa	223	1,853	255	2,331
Asia, Middle East and Australia	279	1,578	451	2,308
Total	1,556	6,066	997	**8,619**

11.2 Equity participation plan

The immediate parent of the Company, Trafigura Beheer B.V., has an equity participation plan (EPP) that is open to employees of the Group. Shares issued to employees are preference shares of Trafigura Beheer B.V., which give rights to economic benefits with limited voting rights. The founders and controlling shareholders of the Group, represented by the Board of Directors of Trafigura Control Holdings Pte. Ltd., a parent company of Trafigura Beheer B.V., in consultation with the Board of Directors of the Company, decide on the share awards to be issued to employees. Annual remuneration (which includes the equity participation awards) is subject to review by the remuneration committee of the Group.

The value of the shares is based on the net asset value of an ordinary share as set out in the Articles of Association of Trafigura Beheer B.V., which management believe is a fair approximation of the fair value. Shares awarded under the EPP may vest immediately or over a period of several years.

Employees do not have the right to freely sell shares that have vested unless Trafigura Control Holdings Pte. Ltd. has granted approval and has refrained from its right to nominate a prospective purchaser and make a purchase offer. Upon termination of employment, employees must transfer all of their shares at the direction of Trafigura Control Holdings Pte. Ltd. or hold the shares subject to further directions of Trafigura Control Holdings Pte. Ltd.

G. Notes to consolidated financial statements

Neither Trafigura Beheer B.V. nor the Group have a legal or constructive obligation to settle the shares held by employees in cash. If employment is ceased prior to the end of the vesting period the shares will be forfeited unless otherwise determined by Trafigura Control Holdings Pte. Ltd.

The Group's EPP is classified as an equity-settled plan in the Group's financial statements; the fair value of the shares granted, determined at the grant date, is recorded in the Consolidated Statement of Income rateably over the vesting period of the shares.

During FY2021, 23,470 immediately vesting shares were granted to employees representing a value of USD23.4 million (FY2020: 92,596 shares representing a value of USD50.4 million) and 123,302 shares were granted with a vesting period of one to five years representing a value of USD122.7 million (FY2020: 163,938 shares representing a value of USD89.4 million).

Compensation in respect of share-based payments recognised in staff costs for the financial year ended 30 September 2021 amounted to USD105.2 million (FY2020: USD130.3 million).

Unrecognised staff costs in respect of rateably vesting shares expected to be recognised from 2022 to 2025 amount to USD167.8 million at 30 September 2021 (FY2020: USD151.7 million for the period from FY2021 to FY2024).

12. Services and other

Accounting policy

Services and other expenses are recognised in the Consolidated Statement of Income when incurred.

	2021 USD'M	2020 USD'M
Energy	419.6	546.2
Metals and Minerals	839.9	834.6
Corporate and Other	(3.4)	9.6
Total	**1,256.1**	1,390.4

Services and other expenses include items such as energy costs, IT services, legal and advisory fees, insurance, commissions, foreign exchange gains and losses, and movements in provisions.

13. Depreciation and amortisation

Accounting policy

Depreciation on property, plant and equipment

Items of property, plant and equipment are depreciated on a straight-line basis over the estimated useful lives of each component. They are depreciated from the date that they are installed and are ready for use. Land and assets under construction are not depreciated.

Depreciation of assets held under finance leases is calculated over the shorter of the lease term or the estimated useful life of the asset.

Unit of production basis

For mining properties and development assets and certain mining equipment, the economic benefits from the asset are consumed in a pattern which is linked to the production level. Such assets are depreciated on a unit of production basis. However, assets within mining operations for which production is not expected to fluctuate significantly from one year to another or which have a physical life shorter than the related mine are depreciated on a straight-line basis as noted above.

In applying the unit of production method, depreciation is normally calculated using the quantity of material extracted from the mine in the period as a percentage of the total quantity of material to be extracted in current and future periods based on proved and probable reserves and, for some mines, other mineral resources. Such non-reserve material may be included in depreciation calculations in circumstances where there is a high degree of confidence in its economic extraction.

Where parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment.

Critical spare parts that are purchased for particular items of plant are capitalised and depreciated on the same basis as the plant to which they relate.

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

Depreciation on rights-of-use assets

For the accounting policies related to the amortisation of rights-of-use assets recognised in relation to the leases of the Group, Refer to Note 21 on leases.

Amortisation of intangible assets

Intangible assets with a finite life are amortised over their useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method for an intangible asset with a finite useful life are reviewed at least at each reporting date. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for by changing the amortisation period or method, as appropriate, and treated as changes in the accounting estimates.

Key accounting estimate and judgement

Useful life and residual value of property, plant and equipment

The useful life and residual value determined by the Group based on estimates and assumptions have a major impact on the measurement and determination of results of property, plant and equipment. The useful life of property, plant and equipment is partly estimated based on their useful productive lives, experiences related to such assets, the maintenance history and the period during which the Group has the economic benefits from the utilisation of the assets. Periodic reviews show whether changes have occurred in estimates and assumptions as a result of which the useful life and/or residual value need to be adjusted. Such an adjustment will be made prospectively.

The estimated useful lives for the current and comparative years of significant items of property, plant and equipment are as follows:

- Buildings 20-50 years
- Machinery and equipment 3-50 years
- Barges and vessels 10-20 years
- Other fixed assets 1-10 years

	2021 USD'M	2020 USD'M
Depreciation of right-of-use assets	1,094.7	1,018.7
Depreciation of property, plant and equipment	312.8	300.6
Amortisation of intangible fixed assets	48.5	50.0
Total	**1,456.0**	1,369.3

For further detail on the composition of depreciation and amortisation (per category), see Notes 19, 20 and 21.

14. Impairments

Accounting policy

Impairments on non-financial assets

Investments in associates and other investments, property, plant and equipment and intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable or at least annually for goodwill. If it is determined that assets are impaired, the carrying amounts of those assets are written down to their recoverable amount, which is the higher of fair value less costs of disposal and value in use.

Impairments on (non-derivative) financial assets and prepayments

The Group assesses the expected credit losses associated with its debt instruments, prepayments and trade receivables carried at amortised cost and fair value through other comprehensive income. The impairment provisions for financial assets and prepayments (disclosed below and in note 23) are based on assumptions about risk of default and expected loss rates.

Loans receivable and prepayments

Over the term of the loans and the prepayments, the Group manages its credit risk by appropriately providing for expected credit losses on a timely basis. The Group classifies its loans receivable and prepayments in categories that reflect their credit risk as follows:

Category	Group definition of category	Basis for recognition of expected credit loss provision
Performing	Customers have a low risk of default and a strong capacity to meet contractual cash flows	12 months expected loss. Where the expected lifetime of an asset is less than 12 months, expected losses are measured at its expected lifetime
Underperforming	A significant increase in credit risk is noted (see definition below)	Lifetime expected losses
Non-performing	The loan meets the definition of default (see below)	Lifetime expected losses
Write-off	Based on observable data the interest and/or principal will not be collected	Asset is written off through profit or loss to extent of expected loss

A significant increase in credit risk is presumed if interest and/or principal repayments are 30 days past due or if there are other indicators of a significant increase in the probability of default. A default is defined when a counterparty structurally fails to perform under a financial contract with a Trafigura group company and such failure is not expected to be cured shortly.

The Group assesses the expected credit loss of these loans and prepayments individually based on the discounted product of probability of default (PD), exposure at default (EAD) and loss given default (LGD) as defined below:

- PD represents the likelihood of a borrower defaulting on its financial obligation, either over the next 12 months or over the remaining lifetime of the obligation.
- EAD is based on the amounts the Group expects to be owed at the time of default. For most cases, this represents the carrying amount of the financial asset.
- LGD represents the Group's expectation of the extent of loss on a defaulted exposure. LGD varies by type of counterparty, seniority of claim and available collateral or other credit support. LGD is expressed as a percentage loss per unit of exposure at the time of default.

The expected credit loss (ECL) is determined by projecting PD, LGD, EAD for each future month and for each exposure. These three components are multiplied together and discounted at the original effective interest rate of the loan and the prepayment. The PD and LGD are developed by utilising historical default studies, forward-looking information and publicly available data.

Trade receivables

The Group applies the simplified approach to providing for expected credit losses, which permits the use of the lifetime expected loss provision for all trade receivables.

Impairment reversal

Impairments, except those related to goodwill, are reversed as applicable to the extent that the events or circumstances that triggered the original impairment have changed.

Write-off

The Group reduces the gross carrying amount of a financial asset when there is no reasonable expectation of recovering a financial asset in its entirety or a portion thereof. A write off constitutes a derecognition event.

G. Notes to consolidated financial statements

Key accounting estimate and judgement

Impairments on non-financial assets

An asset is impaired when its carrying amount exceeds its recoverable amount. When performing an impairment test, the Group assesses whether the cash-generating unit will be able to generate positive net cash flows that are sufficient to support the value of the intangible assets, property, plant and equipment, and financial assets.

For value in use, future cash flow estimates are used to calculate the asset's fair value. These estimates are based on expectations about future operations, primarily comprising estimates about production and sales volumes, commodity prices, operating, rehabilitation and restoration costs and capital expenditures. Changes in such estimates could impact the recoverable values of these assets. Estimates are reviewed regularly by management.

Value in use is determined as the amount of estimated risk-adjusted discounted future cash flows. For this purpose, assets are grouped into cash-generating units (CGUs) based on separately identifiable and largely independent cash flows. The most recent approved financial budgets and (five-year) business plans are the basis for the future cash flow estimates. The valuation model uses the most recent volume and revenue estimates, relevant costs assumptions based on past experience, and where possible, market forecasts of commodity prices. This methodology inherently includes elements of judgement and estimations in relation to projected sales volumes and unit margins. Deterioration or improvement in the volume and pricing outlook may result in additional impairments or reversals. Cash flow estimates are risk adjusted and discounted to reflect local conditions as appropriate.

These key assumptions are based on the current facts and circumstances and information available to management. By nature, these assumptions are subject to developments and change in later periods. This could potentially lead to (reversal of) impairments of individual assets going forward.

Impairments on (non-derivative) financial assets

Loans receivable and prepayments

The Group considers the probability of default upon initial recognition of an asset and whether there has been a significant increase in credit risk on an ongoing basis throughout each reporting period. To assess whether there is a significant increase in credit risk, the Group compares the risk of a default occurring on the asset as at the reporting date with the risk of default as at the date of initial recognition. It considers available reasonable and supportive forwarding-looking information. The following indicators in particular are incorporated: internal credit rating, external credit rating (as far as available), significant changes in the value of the collateral supporting the obligation, significant changes in the expected performance and behaviour of the borrower including changes in the payment status of borrowers in the group and changes in the operating results of the borrower.

Macroeconomic information (such as market interest rates or growth rates) is incorporated as part of the internal rating model.

Trade receivables

In calculating the expected credit loss rates for trade receivables, the Group considers historical loss rates for each category of counterparties, and adjusts for macroeconomic information (such as market interest rates or growth rates).

	2021 USD'M	2020 USD'M
Impairments of property, plant and equipment	423.8	544.9
Impairments of right-of-use assets	158.0	103.7
Impairments of intangible fixed assets	103.7	–
Impairments of fixed assets	**685.5**	648.6
Impairments of financial assets	19.2	246.4
(Reversal of) Impairments of prepayments	(22.1)	148.7
Impairments of financial assets and prepayments	**(2.9)**	395.1
Total impairments – included in operating profit or loss	**682.6**	1,043.7
Impairments of equity-accounted investees	26.3	524.2
Impairments of equity-accounted investees	**26.3**	524.2
Total impairments	**708.9**	1,567.9

As a result of the periodic assessment, the following significant impairment charges and fair value adjustments were recorded:

14.1 Financial year 2021

14.1.1 Impairments of fixed assets – Property, plant and equipment

Australian smelting operations (Nyrstar)

During FY2021, the Group recognised an impairment totalling USD125.0 million in relation to Nyrstar's Australian smelting operations. The impairment is allocated to the goodwill balance related to the Australian operations for USD14.1 million, and to the tangible fixed assets for USD110.9 million. Further information and sensitivity analyses related to this impairment are disclosed in Note 14.1.3.

Burnside logistics export terminal

Oil and oil product demand destruction, largely a result of COVID-19, continues to affect petcoke production in the US Gulf Coast. This development, coupled with very strong domestic coal demand and competing international coal exports from different supply regions, has limited near-term opportunities for bulk export, which resulted in a trigger to perform an impairment test for the Burnside logistics export terminal on the Mississippi River in Louisiana, US.

The identifiable assets were combined into one CGU with independent cash flows to assess the potential impairment. The value-in-use calculation included projections over the FY2021-FY2025 period and resulted in an estimated recoverable amount of USD36 million. Consequently, the related operational fixed assets were impaired by USD55 million. The resulting carrying value is supported by the underlying valuation of the land. The operation specific discount rate in the valuation was 7.0 percent (FY2020: 7.0 percent).

The sensitivity analyses on the valuations show that an increase/decrease in the discount rate of +/-0.5 percentage points has an impact on the recoverable amount of +/- USD4.2 million. A change in the EBITDA of 10 percent causes a change of USD6.3 million to the recoverable amount.

Burgos naphtha splitter

The Group is currently engaged in the engineering and construction of a heavy naphtha splitter in northern Mexico. The project has encountered several construction delays and budget increases as a result of project delays. Additionally, regional condensate production levels and changes in the regulatory environment have created additional risk and uncertainty. These indicators have resulted in a trigger to perform an impairment test.

A value-in-use calculation was performed to determine the recoverable amount of the CGU relative to the carrying value of the fixed assets. The value in use is calculated based upon the discounted cash flows associated with the CGU using management projections and a discount rate specific to the projected cash flows. Based on the projected discounted cash flows, the recoverable amount was determined to be less than the carrying amount of the fixed assets resulting in an impairment. The operation specific discount rate in the valuation was 9.2 percent.

14.1.2 Impairments of fixed assets – Rights-of-use assets

Corpus Christi

The Group has certain rights-of-use assets located in Corpus Christi, Texas, which enable the transportation, storing, processing and vessel loading of crude oil and crude oil products. As the demand for crude oil (products) did not fully recover to pre-COVID-19 levels, this resulted in a trigger to perform an impairment test.

To assess a potential impairment, these rights-of-use assets were determined to be a single CGU. A value in use is calculated based upon the discounted cash flows associated with the CGU using management projections and a discount rate specific to the projected cash flows. Based on the projected discounted cash flows, the recoverable amount of USD82.5 million was determined to be less than the carrying amount of the rights-of-use assets by USD158 million, which was recorded as an impairment. The operation specific discount rate in the valuation was 3.3 percent (FY2020: 3.0 percent). The projected throughput barrel volume for the 24-month outlook was 484 million barrels.

A change in the EBITDA of 10 percent causes a change of USD9.5 million to the recoverable amount. A change in the throughput barrel volume of 10 percent causes a change of USD8.7 million to the recoverable amount.

14.1.3 Impairments of fixed assets – Intangible fixed assets

Puma Energy

Upon obtaining control, the Group concluded that, as a result of Puma Energy's financial condition, the consideration paid in the transactions was not the most suitable basis to determine the fair value of the acquiree. It based its measurement on a fair value measurement, where the value-in-use balance was determined using cash flows and discount rates reflecting specific geographical regions and operations (downstream, infrastructure, bitumen, etc.) in which Puma Energy operates over the projection period FY2022 up to and including FY2026. As a result, management concluded a day 1 impairment of USD88.4 million was required to reduce its Puma Energy related goodwill balance to an amount of USD993.1 million. The average weighted discount rate in the valuation was 10.7 percent. Refer to Note 7.1.

The sensitivity analysis on the valuations show that an increase/decrease in the discount rate of +/-0.5 percentage points has an impact on the valuation of minus USD185.8 million/plus USD210.5 million. A change in the EBITDA of 10 percent causes a change of USD500.7 million to the valuation.

Nyrstar

The acquisition of the Nyrstar Group in 2019 financial year resulted in the recognition of a goodwill balance totalling USD64.3 million. The group performs a goodwill impairment test on an annual basis. For impairment testing purposes, the carrying amount of goodwill is allocated to three cash generating units (CGUs).

For FY2021, the recoverable amount of the CGUs was determined based on value-in-use calculations using nominal cash flow projections from approved financial budgets and consumption/production plans covering a five-year period.

The below table includes the allocation of the goodwill carrying amount, the impairment charge recognised during the financial year and the pre-tax discount rate applied to the cash flow projections.

Goodwill balance per CGU	Nyrstar – Europe	Nyrstar – Australia	Nyrstar – United States of America	Total Nyrstar related goodwill
Balance at 1 October 2020	48.0	14.1	2.2	**64.3**
Impairment recognised during the year	–	(14.1)	–	(14.1)
Balance at 30 September 2021	48.0	–	2.2	**50.2**
Pre-tax discount rate applied	9.1%	9.2%	9.5%	

During the financial year ended 30 September 2021, the Australian smelting operations continued to face operating challenges resulting in a reduction to the processed feedstock compared to planned levels. Although management expects the performance to improve over the coming years, the operating challenges in 2021 led to a downward adjustment of the expected feedstock processing levels in the coming years. These lower volume projections resulted in a recoverable amount which was significantly lower than the combined carrying value of goodwill and other fixed assets. The total impairment charge recognised during the year amounted to USD125.0 million, which is allocated to the goodwill balance of the CGU (USD14.1 million) and the tangible fixed assets (USD110.9 million).

The recoverable amounts for the European and US CGUs significantly exceeded the recorded goodwill balance and as a result, no impairment has been recognised for these CGUs.

Key assumptions used in value-in-use calculations and sensitivity to changes in assumption

The calculation of value in use for all of the above CGUs is sensitive to the following assumptions:

- Discount rates;
- Foreign exchange rates;
- Physical forward prices for (precious) metals; and
- Treatment charges.

G. Notes to consolidated financial statements

Discount rates – Discount rates represent the current market assessment of the risks specific to each CGU, taking into consideration individual risks of the underlying assets that have not been incorporated in the cash flow estimates. The discount rate calculation is based on the specific circumstances of the Group and the Nyrstar operations and is derived from its weighted average cost of capital (WACC). WACC considers both debt and equity. The cost of equity is derived from the expected return on investment by the Group's investors. The cost of debt is based on the interest-bearing borrowings the Group is obliged to service. Nyrstar-specific risk is incorporated by applying individual beta factors. The beta factors are evaluated annually based on publicly available market data.

An increase in the pre-tax discount rate by 0.5 percent would reduce the recoverable amounts by USD81.7 million for Europe, USD60.8 million for Australia and USD34.4 million for the US. For the European and US CGUs such change would still provide for significant headroom.

Foreign exchange rates/physical forward prices for (precious) metals/treatment charges – Estimates are obtained from internal research and external data. The sensitivity of the recoverable amount when prices of (precious) metals, benchmark treatment charges or foreign exchange rates increase or decrease on average by 5 percent is as follows:

Cash generating untit ('CGU')	Metal prices +5% USD'm	Metal prices -/- 5% USD'm	Fx rates +5% USD'm	Fx rates -/- 5% USD'm	Benchmark TC's +5% USD'm	Benchmark TC's -/- 5% USD'm
Nyrstar – Europe	199.3	(201.0)	(322.4)	315.3	138.6	(139.5)
Nyrstar – Australia	229.0	(230.4)	(284.4)	282.7	73.2	(73.2)
Nyrstar – United States of America	98.6	(101.6)	–	–	19.5	(19.6)
	526.9	**(533.0)**	**(606.8)**	**598.0**	**231.3**	**(232.3)**

For the European and US CGUs, none of the above scenarios would result in a goodwill impairment.

14.1.4 Impairments of financial assets and prepayments

Refer to Note 23.1 for the loss provision on prepayments, Note 23.2 for the loss provision on loans receivable, and Note 26 for the loss provision on trade receivables.

14.2 2020 financial year

14.2.1 Impairments of fixed assets – Property, plant and equipment

Magdalena River supply chain operation

The Group develops a multimodal supply chain operation in Colombia. The project includes an inland port at Barrancabermeja and fluvial equipment providing multimodal logistics services linking the industrial heartland to the Caribbean ports of Cartagena and Barranquilla via the Magdalena River. These activities will benefit from Colombia's effort to restore long-term navigability of the Magdalena River. However, there is a delay in the dredging and dyking programme as the government is replacing the original construction company, which was initially awarded the concession, with another. In combination with the COVID-19 pandemic, this resulted in an impairment of USD392 million.

Burnside logistics export terminal

Lower coal prices, a decline in US coal production and related export demand, together with an acceleration of coal-fired power plants coming offline, resulted in an impairment of USD72 million on the Burnside logistics export terminal on the Mississippi river in Louisiana, US.

Other

The remaining impairments on property, plant and equipment (USD80 million) are individually lower than USD35 million each.

14.2.2 Impairments of fixed assets – Rights-of-use assets

Corpus Christi

The Group has certain rights-of-use assets located in Corpus Christi, Texas, which enable the transportation, storing, processing and vessel loading of crude oil and crude oil products. The global decrease in demand for crude oil (products) as a result of COVID-19 resulted in an impairment of the rights-of-use assets by USD103.7 million.

14.2.3 Impairments of financial assets and prepayments

The global decrease in demand for commodity products as a result of COVID-19 resulted in an increased credit risk towards our suppliers. Therefore, the Group calculated expected credit losses on the outstanding prepayments as from the financial year 2020. The outcome of these calculations amounted to an ECL provision of USD143.8 million.

Refer to Note 23.1 for the loss provision on prepayments, 23.2 for the loss provision on loans receivable, and Note 26 for the loss provision on trade receivables.

14.2.4 Impairments of equity-accounted investees

Tendril Ventures

The results of the equity-accounted investee Tendril Ventures (which indirectly holds a 49 percent equity interest in Nayara Energy Limited) were negatively impacted by adverse market developments. The negative impact on global energy demand and increased global crude supplies caused refinery margins to tighten, which in turn resulted in a downward adjustment in expected operating performance compared to previous expectations. The carrying amount of the investment exceeded the recoverable amount by USD322.0 million, which was consequently recognised as an impairment.

Puma Energy

The financial performance of Puma Energy Holdings Pte. Ltd. (Puma Energy) continued to be negatively affected by ongoing uncertainty and varying levels of COVID-19 restrictions across its key markets, especially aviation. Although, a restructuring of the activities was started to turn around the performance of its operations, it still resulted in an impairment of USD191 million.

15. Result from equity-accounted investees and investments

Accounting policy

Gains on the sale of assets and the divestment of interests in other entities are deemed realised at the time the benefits and the risks of the assets are substantially borne by the buyer and there is no uncertainty as to whether the agreed payment will be received. Gains on the sale of subsidiaries, joint ventures and associates are realised at the time control, joint control or significant influence is no longer exercised.

Dividend income from investments is recognised when the shareholder's right to receive payment has been established (provided that it is probable that the economic benefits will flow to the Group and the amount of income can be measured reliably).

	2021 USD'M	2020 USD'M
Share of profit/(loss) of equity-accounted investees	**(110.8)**	(327.0)
Disposal results of equity-accounted investees	(414.0)	1.7
Impairments of equity-accounted investees	(26.3)	(524.2)
Disposal results and impairments of equity-accounted investees	**(440.3)**	(522.5)
Income/(expenses) from equity-accounted investees	**(551.1)**	(849.5)
Gain/(loss) on fair value through profit and loss instruments	87.0	(128.1)
Gain/(loss) on divestment of subsidiaries	–	(0.8)
Dividend income	1.5	7.6
Other	–	(6.5)
Income/(expenses) from investments	**88.5**	(127.8)
Result from equity-accounted investees and investments	**(462.6)**	(977.3)

15.1 Income/(expenses) from equity-accounted investees

Share of profit/(loss) of equity-accounted investees

Refer to Note 22.

Disposal results of equity-accounted investees

Puma Energy

The disposal result on equity-accounted investees includes the recycling loss of the foreign currency translation balance relating to the previously held equity-accounted investment in Puma Energy (USD716.0 million) and the fair value remeasurement loss on this investment (USD79.7 million).

For more details, refer to Note 7.1.

Minas de Aguas Tenidas SA (MATSA)

In September 2021, the Group sold its 50 percent stake in Minas de Aguas Tenidas SA (MATSA) to Sandfire Resources Limited for a total expected consideration of USD777.8 million, comprising a headline selling price of USD932.5 million, less expected net debt and working capital adjustments of USD153.7 million. The sale was agreed in partnership with the Group's former joint-venture partner, Mubadala Investment Company PJSC, which will receive the same corresponding consideration, making Sandfire Spain Holdings Limited the new sole owner of MATSA.

The sale and purchase agreement dated 23 September 2021 ensures that the departing shareholders have, during the period between signing and completion, limited ability to impact the operational and strategic policies of MATSA through their representation in the Board. During this period, MATSA will operate on a basis of limited self-governance with full autonomy over the decisions acting on their ordinary course of business on a day-to-day basis. Therefore, the departing shareholders no longer have the power, directly or indirectly, to govern the financial and operational activities of MATSA. Decisions of a more strategic nature will be deferred until post completion. Completion of the transaction will occur upon receipt of the anti-trust approval, which is expected during the first half of financial year 2022. As such, the Group has derecognised the equity-accounted investee and recognised the gain on disposal as at 30 September 2021.

The pre-tax profit on disposal of USD380.5 million is reported within the Consolidated Statement of Income under disposal results and impairments of equity-accounted investees, with USD10 million of related transaction taxes and fees recognised through services and other expenses.

This consideration, less the initial USD50 million deposit having been received in escrow, is recognised as a receivable within Other debtors in Trade and other receivables in the Consolidated Statement of Financial Position as at 30 September 2021. Refer to Note 26.

Impairments of equity-accounted investees

Refer to Note 14.

G. Notes to consolidated financial statements

15.2 Income/(expenses) from investments

Gain/(loss) on fair value through profit and loss instruments

The gain on fair value through profit and loss instruments includes various fair value movements on other investments, including a USD25.6 million positive fair value movement of the debt securities related to the investment in Porto Sudeste (FY2020: a loss of USD124.6 million).

The listed debt securities consist of a financial instrument related to the investment in Porto Sudeste, which is accounted for under equity-accounted investees. These instruments are held to collect cash flows and are designated as fair value through profit and loss, since the payments are dependent on the port's throughput. Since the free float of these listed debt instruments is extremely thin and no active market exists (the value of the average daily traded volume was less than USD500), the fair value is determined using a Level 3 valuation. The fair value of this instrument is based on the port's discounted cash flow model in which the business plan of Porto Sudeste is reflected. Revenue is calculated over a period ending in 2064 and throughput volumes are held constant from 2029 onwards. In this calculation, based on an external assessment, management used an annual discount rate of 12.7 percent (FY2020: 12.7%) per year to calculate a net present value. Due to the limited marketability of the listed securities, a further flat discount factor of 33 percent is applied on the net present value amount (FY2020: 33%).

During the year, the Level 3 valuation of the debt securities resulted in the recognition of a gain of USD25.6 million (FY2020: loss of USD124.6 million), increasing the valuation of the debt securities to USD246.8 million as at 30 September 2021 (30 September 2020: USD220.9 million). The sensitivity analysis on this valuation shows that an increase/decrease of the port's throughput of 5 percent has an impact of USD8 million (FY2020: USD9 million) on the valuation, and an increase/decrease of the discount rate by 0.5 percentage points or 50 bps has an impact of USD15 million (FY2020: USD15 million) on the valuation. A change in the discount rate due to lack of marketability by 5 percentage points or 500 bps has an effect of USD18 million (FY2020: USD16 million) on the valuation.

16. Result from financing activities

Accounting policy

Interest income and interest expense are recognised on a time-proportion basis using the effective interest rate (EIR) method.

	2021 USD'M	2020 USD'M
Finance income	405.9	500.1
Finance expense	(1,124.2)	(1,161.6)
Total	**(718.3)**	(661.5)

17. Income tax

Accounting policy

Income tax expense comprises current and deferred tax. Current and deferred tax are recognised in the Consolidated Statement of Income, except to the extent that it relates to a business combination, or items recognised directly in equity or in other comprehensive income.

Current income tax

Current income tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years. The charge for taxation includes Singaporean and foreign corporate income taxation. Due to the different statutory rates applicable and non-deductible expenses, the Group effective tax charge differs from the statutory tax rate applicable in Singapore.

Deferred tax

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes, and the amounts used for taxation purposes. The measurement of deferred tax reflects the tax consequences that would follow the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, using tax rates enacted or substantively enacted at the reporting date.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis, or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Tax exposure

In determining the amount of current and deferred tax the Group takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. The Group believes that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Group to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact the tax expense in the period that such a determination is made.

Key accounting estimate and judgement

Deferred tax assets are recognised only to the extent it is considered probable that those assets will be recoverable. This involves an assessment of when those deferred tax assets are likely to reverse, and a judgement as to whether or not there will be sufficient taxable profits available to offset the tax assets when they do reverse. These judgements are subject to risk and uncertainty and hence, to the extent assumptions regarding future profitability change, there can be an increase or decrease in the amounts recognised in the Consolidated Statement of Income in the period in which the change occurs. The recoverability of deferred tax assets, including the estimates and assumptions contained therein, are reviewed regularly by management.

17.1 Tax expense

Income tax expense recognised in the Consolidated Statement of Income consists of the following:

	2021 USD'M	2020 USD'M
Current income tax expense	692.8	270.5
Adjustments in relation to current income tax of previous year	(88.2)	(12.7)
Deferred tax expense/(income)	(240.9)	24.3
Withholding tax in the current year	4.3	9.4
Total	**368.0**	291.5

17.2 Tax recognised in other comprehensive income

The tax credit/(charge) relating to components of other comprehensive income is as follows:

	2020 USD'M	2020 USD'M
Tax (expense)/income on cash flow hedges	8.7	18.3
Tax (expense)/income on hyperinflation adjustments	–	–
Total	**8.7**	18.3

17.3 Reconciliation of effective tax rate

The Group's operations are subject to income taxes in various foreign jurisdictions. The statutory income tax rates vary between 10 percent and 35 percent, which results in a difference between the weighted average statutory income tax rate and Singapore's statutory tax rate of 17 percent (FY2020: 17%).

The change to the weighted average statutory income tax rate is a consequence of a change in the mix of profits and losses generated in the various countries in which the Group operates. The change to the effective tax rate is a consequence of a change in the mix of taxable profits and losses generated in the various countries in which the Group operates.

The reconciliation between tax expense and the result of accounting profit multiplied by the Company's statutory income tax rate for the years ended 30 September 2021 and 2020 is as follows:

	2021		2020	
	USD'M	%	USD'M	%
Profit before tax	3,442.7	–	1,890.3	–
Income tax expense at statutory blended tax rate	516.7	15.0%	249.9	13.2%
Tax effect of adjustments to arrive at the effective income tax rate:				
Effect of unused tax losses, not recognised as deferred tax assets	47.0		85.2	
Non-taxable income or subject to specific tax holidays	(205.6)		(251.7)	
Non-deductible expenses	103.2		202.0	
Foreign exchange	(9.2)		6.8	
Adjustments in relation to income tax of previous year	(88.2)		(12.7)	
Tax rate changes	(0.2)		2.5	
Withholding tax	4.3		9.5	
Effective tax rate	**368.0**	**10.7%**	291.5	15.4%

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17.4 Deferred tax assets and liabilities

The breakdown of deferred tax assets and liabilities in significant components and the movement between 1 October 2020 and 30 September 2021 of these components is as follows:

USD'M	Opening balance	Recognised income statement	Other comprehensive income	Acquired in business combination	FX and other	Closing balance	Deferred tax assets	Deferred tax (liabilities)
Property, plant and equipment	(141.8)	156.5	–	(197.2)	(20.3)	(202.8)	176.1	(378.9)
Investment in subsidiaries and associates	(4.2)	6.7	–	–	–	2.5	2.5	–
Other temporary differences (including intangible assets)	10.4	52.8	4.5	(125.4)	43.4	(14.3)	120.1	(134.4)
Provisions	(55.2)	64.1	0.1	8.3	(5.4)	11.9	10.4	1.5
Derivatives	2.2	36.1	(1.1)	1.0	(8.0)	30.2	51.2	(21.0)
Tax losses carried forward and tax attributes	103.1	(75.4)	–	30.1	(13.3)	44.5	44.5	–
Total deferred tax position	(85.5)	240.8	3.5	(283.2)	(3.6)	**(128.0)**	**404.8**	**(532.8)**
Set-off deferred tax positions							(139.1)	139.1
Net deferred tax position							**265.7**	**(393.7)**

Deferred tax assets are recognised for temporary differences and unused tax losses to the extent that realisation is probable as sufficient taxable profit is expected in the countries where the deferred tax assets are originated. The majority of the reported deferred taxes will be settled after 12 months from the balance sheet date.

No significant deferred tax liability has been recognised in respect of undistributed earnings of subsidiaries. This is because the Group is able to control the timing of the reversal of the temporary differences and it is probable that such differences will not reverse in the foreseeable future.

Unrecognised tax losses carry forward and tax attributes	2021 USD'M
Losses expiring in 2022	56.3
Losses expiring in 2023	47.2
Losses expiring in 2024	46.6
Losses expiring in 2025	212.0
Losses expiring in 2026	533.3
Losses expiring in 2027	0.5
Losses expiring in 2028	37.5
Losses expiring after 2028	1,207.7
Losses which do not expire	1,026.5
Total	**3,167.6**

	2020 USD'M
Losses expiring in 2021	4.9
Losses expiring in 2022	120.0
Losses expiring in 2023	21.4
Losses expiring in 2024	19.7
Losses expiring in 2025	371.4
Losses expiring in 2026	869.4
Losses expiring in 2027	–
Losses expiring after 2027	1,174.3
Losses which do not expire	362.8
Total	**2,943.9**

The unrecognised deferred tax assets for losses and tax attributes relate to entities for which it is not probable that taxable profit will be available to offset against these losses and attributes.

17.5 Tax uncertainties

The Group operates in numerous jurisdictions worldwide resulting in cross border intercompany transactions whereby the transfer pricing rules applied in one country have an impact on the results in another country. In order to reduce transfer pricing uncertainties, transfer pricing studies are performed and reports are prepared to fulfil local transfer pricing requirements. Due to complexity of tax rules, interpretation by local taxing authorities can differ from the Group's interpretation based on opinions provided by local tax counsel. The Group believes that it has sufficiently provided for financial consequences (if any).

In countries where the Group starts new operations or alters business models, the issue of permanent establishment and profit allocation thereto may arise. The risk is that taxing authorities in multiple jurisdictions claim taxation rights over the same profit.

18. Underlying EBITDA

Accounting policy

The Group believes that the supplemental presentation of underlying EBITDA provides useful information on the Group's financial performance and its ability to service debt and to fund capital expenditures, and provides a helpful measure for comparing its operating performance with that of other companies.

Underlying EBITDA, when used by Trafigura, means operating profit or loss before depreciation and amortisation excluding share-based payments and other adjustments. In addition to share-based payments, the adjustments made to arrive at underlying EBITDA are considered exceptional and/or non-operational from a management perspective based on their size or nature. They can be either favourable or unfavourable. These items include for example:

- Significant restructuring costs and other associated costs arising from significant strategy changes that are not considered by the Group to be part of the normal operating costs of the business;
- Significant acquisition and similar costs related to business combinations such as transaction costs;
- Provisions that are considered to be exceptional and/or non-operational in nature and/or size to the financial performance of the business; and
- Various legal settlements that are significant to the result of the Group.

From time to time, it may be appropriate to disclose further items as exceptional or non-operational items in order to reflect the underlying performance of the Group.

Underlying EBITDA is not a defined term under IFRS and may therefore not be comparable with similarly titled profit measures and disclosures reported by other companies. It is not intended to be a substitute for, or superior to, GAAP measures.

	2021 USD'M	2020 USD'M
Operating profit or (loss) before depreciation and amortisation	**6,762.2**	5,942.1
Adjustments		
Share-based payments	105.2	130.3
Adjustments	**105.2**	130.3
Underlying EBITDA	**6,867.4**	6,072.4
As percentage of revenue	3.0%	4.1%

Share-based payments have been excluded due to their non-cash nature. See Note 11 for more details. There were no non-recurring adjustments during the financial years ending 30 September 2021 and 2020.

G. Notes to consolidated financial statements

19. Property, plant and equipment

Accounting policy

Recognition and measurement

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses. The initial cost of an asset comprises its purchase price or construction cost, any costs directly attributable to bringing the asset into operation, the initial estimate of any decommissioning obligation, if any, and, for qualifying assets, borrowing costs. The purchase price or construction cost is the aggregate amount paid and the fair value of any other consideration given to acquire the asset.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components). The costs of major repairs and maintenance (dry-docking or turnarounds) are capitalised and depreciated over their useful life.

Gains or losses on disposal of an item of property, plant and equipment are recorded in the Consolidated Statement of Income in services and other expenses.

The carrying amount of property, plant and equipment is reviewed for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable.

Assets in the course of construction are capitalised as a separate component of property, plant and equipment, included within other fixed assets. Upon completion, the cost of construction is transferred to the appropriate category.

Mineral properties and mine development costs

The costs of acquiring mineral reserves and mineral resources are capitalised in the Consolidated Statement of Financial Position as incurred. Capitalised costs representing mine development costs include costs incurred to bring the mining assets to a condition of being capable of operating as intended by management. Mineral reserves and in some instances mineral resources and capitalised mine development costs are depreciated from the commencement of production using generally the unit of production basis. They are written off if the property is abandoned.

Exploration and evaluation assets

Exploration and evaluation expenditure relate to costs incurred in the exploration and evaluation of potential mineral reserves and resources and includes costs such as exploratory drilling and sample testing and the costs of pre-feasibility studies. Exploration and evaluation expenditure for each area of interest, other than that acquired from the purchase of another mining company, is capitalised as an asset provided that one of the following conditions is met:

- Such costs are expected to be recouped in full through successful development and exploration of the area of interest or alternatively, by its sale; or
- Capitalised exploration and evaluation assets are transferred to mine development assets once the work completed to date supports the future development of the property and such development receives appropriate approvals.

Acquired mineral rights comprise identifiable exploration and evaluation assets, including mineral reserves and mineral resources, which are acquired as part of a business combination and are recognised at fair value at the date of acquisition. The acquired mineral rights are reclassified as "mineral properties and mine development costs" from commencement of development and depreciated on a unit of production basis, when commercial production commences.

Subsequent costs

Subsequent expenditure is capitalised only when it is probable that the future economic benefits associated with the expenditure will flow to the Group.

Major cyclical maintenance expenditure

Group entities recognise in the carrying amount of an item of plant and equipment, the incremental cost of replacing a component part of such an item when that cost is incurred. If it is probable that the future economic benefits embodied within the item will flow to the Group entity, the cost incurred is significant in relation to the asset and the cost of the item can be measured reliably. Accordingly, major overhaul expenditure is capitalised and depreciated over the period in which benefits are expected to arise (typically three to four years). Any remaining book value of a maintenance component of property, plant and equipment to which the major maintenance is applied is derecognised at that point in time. All other repairs and maintenance are charged to the Consolidated Statement of Income during the financial period in which the costs are incurred.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, i.e. assets that necessarily take a substantial period of time to get ready for their intended use or sale, are calculated using the EIR method and are capitalised as part of the cost of those assets. The capitalisation of such borrowing costs ceases when the assets are substantially ready for their intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs capitalised.

All other borrowing costs are expensed in the period in which they are incurred. Borrowing costs consist of interest and other costs that an entity incurs directly in connection with the borrowing of funds.

USD'M	Land and buildings	Machinery and equipment	Barges and vessels	Mine property and development	Other fixed assets	Total
Cost						
Balance at 1 October 2020	1,280.7	2,381.3	582.9	61.7	847.4	**5,154.0**
Additions	16.5	84.8	226.5	19.5	335.8	683.1
Acquired in business combination	1,281.4	290.8	9.9	–	109.3	1,691.4
Reclassifications	18.1	145.2	8.4	(20.7)	(237.6)	(86.6)
Effect of movements in exchange rates, including hyperinflation adjustment	0.9	3.7	–	4.1	0.7	9.4
Disposals	(3.1)	(66.3)	(216.2)	–	(24.6)	(310.2)
Balance at 30 September 2021	2,594.5	2,839.5	611.5	64.6	1,031.0	**7,141.1**
Depreciation and impairment losses						
Balance at 1 October 2020	473.2	710.3	271.6	5.5	263.2	**1,723.8**
Depreciation	41.5	184.3	25.4	8.9	52.7	312.8
Impairment losses	94.0	132.2	–	–	199.8	426.0
Reclassifications	(12.2)	1.4	(1.6)	(14.4)	(56.5)	(83.3)
Effect of movements in exchange rates, including hyperinflation adjustment	(2.1)	(0.5)	–	–	0.9	(1.7)
Disposals	(1.3)	(54.6)	–	–	(9.2)	(65.1)
Balance at 30 September 2021	593.1	973.1	295.4	–	450.9	**2,312.5**
Net book value at 30 September 2021	2,001.4	1,866.4	316.1	64.6	580.1	**4,828.6**

USD'M	Land and buildings	Machinery and equipment	Barges and vessels	Mine property and development	Other fixed assets	Total
Cost						
Balance at 1 October 2019	1,231.1	2,206.5	629.7	37.1	838.6	**4,943.0**
Additions	17.9	58.6	58.0	20.7	275.1	430.3
Reclassifications	35.4	84.6	12.1	6.3	(183.7)	(45.3)
Effect of movements in exchange rates, including hyperinflation adjustment	2.2	78.9	–	(2.4)	10.9	89.6
Disposals	(5.9)	(47.3)	(116.9)	–	(40.3)	(210.4)
Divestment of subsidiaries	–	–	–	–	(53.2)	(53.2)
Balance at 30 September 2020	1,280.7	2,381.3	582.9	61.7	847.4	**5,154.0**
Depreciation and impairment losses						
Balance at 1 October 2019	301.9	334.7	173.0	1.8	257.5	**1,068.9**
Depreciation	48.8	172.4	33.9	10.2	35.3	300.6
Impairment losses	134.2	249.5	121.0	–	24.6	529.3
Reclassifications	–	(2.9)	(2.6)	(6.5)	(1.5)	(13.5)
Effect of movements in exchange rates, including hyperinflation adjustment	(8.1)	3.2	–	–	(1.4)	(6.3)
Disposals	(3.6)	(46.6)	(53.7)	–	(20.1)	(124.0)
Divestment of subsidiaries	–	–	–	–	(31.2)	(31.2)
Balance at 30 September 2020	473.2	710.3	271.6	5.5	263.2	**1,723.8**
Net book value at 30 September 2020	807.5	1,671.0	311.3	56.2	584.2	**3,430.2**

G. Notes to consolidated financial statements

19.1 Financial year 2021

Total additions for the year (USD683.1 million) mainly relate to investments in the Nyrstar industrial facilities and mines (USD267.0 million), vessels (USD202.0 million) and various individually smaller projects. The investments in Nyrstar are made across the global operations with the main investments relating to continuation of the catch up of neglected maintenance prior to acquisition, including the installation of gas cleaning equipment in Europe.

The USD245.1 million disposals mainly relate to the sale of vessels, which were subsequently leased back for a period between five and seven years.

Included in the 'Other fixed assets' category are assets under construction, which relates to assets not yet in use, and some Nyrstar related assets. Net book value as at 30 September 2021 amounted to USD383.1 million. Once the assets under construction come into operation they are reclassified to the appropriate asset category and from that point they are depreciated.

Certain items of property, plant and equipment are pledged as collateral for an amount of USD367.5 million.

Depreciation is included in depreciation and amortisation. Impairment charges are separately disclosed in the Consolidated Statement of Income.

Refer to Note 14 for details on impairments, and to Note 7 for information on amounts acquired in business combination.

During the financial year ended 30 September 2021, the Group capitalised borrowing cost of a total amount of USD4.1 million under other fixed assets.

19.2 Financial year 2020

Total additions for the year amounted to USD430.3 million, mainly relating to investments in the Nyrstar industrial facilities and mines of USD279.1 million, primarily maintenance expenditure, and vessels of USD58.0 million and various individually smaller projects. Disposals amounted to USD86.3 million, mainly related to the sale of vessels that were subsequently leased back.

Included in the 'Other fixed assets' category were assets under construction, which relates to assets not yet in use, and some Nyrstar related assets. Net book value as at 30 September 2020 amounted to USD449.0 million. Once the assets under construction come into operation they are reclassified to the appropriate asset category and from that point they are depreciated.

Certain items of property, plant and equipment are pledged as collateral for an amount of USD250.1 million.

Depreciation is included in depreciation and amortisation. Impairment charges are separately disclosed in the Consolidated Statement of Income.

Refer to Note 14 for details on impairments.

During the financial year ended 30 September 2020, the Group capitalised borrowing cost of a total amount of USD nil under other fixed assets.

20. Intangible fixed assets

Accounting policy

Goodwill

Goodwill that arises on the acquisition of subsidiaries is presented with intangible assets. For the measurement of goodwill at initial recognition, reference is made to this in Note 7 – Business combinations and non-controlling interests.

Goodwill is measured at cost less accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's CGUs or group of CGUs that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a CGU and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain and loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the CGU retained.

In respect of equity-accounted investees, the carrying amount of goodwill is included in the carrying amount of the investment, and any impairment loss is allocated to the carrying amount of the equity-accounted investee as a whole.

Licences and other intangible assets

Licences and other intangible assets include software development costs and certain long-term concession rights related to land usage. These items are stated at cost, less accumulated amortisation and accumulated impairment losses. Licences are amortised over the term of the licence, generally not exceeding 10 years. The long-term concession rights have useful lives ranging from 33 to 99 years.

An intangible asset acquired as part of a business combination is measured at fair value at the date of acquisition and is recognised separately from goodwill if the asset is separable or arises from contractual or other legal rights.

Gains or losses on disposal of intangible assets are recorded in the Consolidated Statement of Income in services and other.

USD'M	Goodwill	Licences	Other intangible assets	Total
Cost				
Balance at 1 October 2020	70.2	25.6	511.6	**607.4**
Additions	1.2	–	65.7	66.9
Acquired in business combination	1,081.4	26.5	441.6	1,549.5
Reclassifications	–	–	1.4	1.4
Effect of movements in exchange rates, including hyperinflation adjustment	–	0.2	2.4	2.6
Disposals	–	–	(1.1)	(1.1)
Balance at 30 September 2021	1,152.8	52.3	1,021.6	**2,226.7**
Amortisation and impairment losses				
Balance at 1 October 2020	5.9	23.5	367.7	**397.1**
Amortisation	–	–	48.5	48.5
Impairment	102.5	–	1.2	103.7
Effect of movements in exchange rates, including hyperinflation adjustment	–	0.2	0.7	0.9
Reclassifications	–	–	(1.4)	(1.4)
Disposals	–	–	(1.1)	(1.1)
Balance at 30 September 2021	108.4	23.7	415.6	**547.7**
Net book value at 30 September 2021	1,044.4	28.6	606.0	**1,679.0**

USD'M	Goodwill	Licences	Other intangible assets	Total
Cost				
Balance at 1 October 2019	70.2	27.7	450.2	**548.1**
Additions	–	–	60.2	60.2
Reclassifications	–	–	1.2	1.2
Effect of movements in exchange rates, including hyperinflation adjustment	–	(2.1)	0.1	(2.0)
Disposals	–	–	(0.1)	(0.1)
Balance at 30 September 2020	70.2	25.6	511.6	**607.4**
Amortisation and impairment losses				
Balance at 1 October 2019	–	20.4	315.7	**336.1**
Amortisation	–	0.2	49.9	50.1
Impairment	5.9	5.0	2.4	13.3
Effect of movements in exchange rates, including hyperinflation adjustment	–	(2.1)	(0.3)	(2.4)
Reclassifications	–	–	0.1	0.1
Disposals	–	–	(0.1)	(0.1)
Balance at 30 September 2020	5.9	23.5	367.7	**397.1**
Net book value at 30 September 2020	64.3	2.1	143.9	**210.3**

Goodwill is the only intangible asset with an indefinite life. All other intangible assets are amortised as follows:

- Licence fees paid are amortised evenly over their respective periods, for which the licences have been granted, generally not exceeding 10 years;
- Other intangible assets are amortised evenly over their estimated useful economic life. Other intangibles mainly consist of:
  - Brand name and customer relationships acquired in the business combination;
  - Software of USD152.2 million (FY2020: USD141.3 million) that is amortised over five years, and payments made under exclusivity contracts with clients for petroleum fuels and lubricants that are amortised over the contractual period.

Amortisation expenses is included in depreciation and amortisation. Impairment charges are separately disclosed in the income statement. Intangible assets with finite lives are tested for impairment when impairment indicators exist. For the purpose of impairment testing, goodwill is allocated to the CGUs or groups of CGUs.

Goodwill impairment

The total goodwill impairment charge recognised for the year amount to USD102.5 million. This amount includes the day 1 goodwill impairment resulting from the Puma Energy acquisition for USD88.4 million and an impairment of Nyrstar related goodwill for USD14.1 million. For further information on these goodwill impairments, refer to Note 14.

G. Notes to consolidated financial statements

21. Leases

Accounting policy

When the Group is the lessee

As a lessee, at inception of a contract the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether:

- The contract involves the use (explicitly or implicitly) of an identified asset;
- The Group has the right to obtain substantially all of the economic benefits throughout the period of use; and
- The Group has the right to direct the use of the asset.

This policy is applied to all lease contracts except for short-term leases and leases of low-value assets. If a contract is, or contains a lease, the Group accounts a lease component separately from non-lease components. As a lessee, the Group allocates the consideration in the contract based on the relative stand-alone price of components, and the aggregate stand-alone price of the non-lease components (if applicable).

For all leases, the Group recognises a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use. Assets and liabilities arising from a lease are initially measured on a present value basis. The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate of interest that the lessee would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. Generally, the Group uses its incremental borrowing rate as the discount rate. The incremental borrowing rate is determined using recent third-party financing received adjusted for both changes in financing conditions since third-party financing was received and for terms specific to leases.

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

Lease payments included in the measurement of the lease liability include the following:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivables;
- Variable lease payment that are based on an index or a rate;
- Amounts expected to be payable by the lessee under residual value guarantees;
- The exercise price of a purchase option if the lessee is reasonably certain to exercise that option; and
- Payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

The rights-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, any initial direct costs, and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located less any lease incentives received.

Subsequent to initial recognition, the lease liability is measured at amortised cost using the effective interest method, and the rights-of-use asset is depreciated on a straight-line basis, from the commencement date to the earlier of the end of the useful life of the right-of-use asset, or the end of the lease term.

The lease liability is remeasured when:

- There is a change in future lease payments arising from changes in an index or rate;
- There is a change in the Group's assessment of whether it will exercise an extension option; or
- There are modifications in the scope or the consideration of the lease that were not part of the original term.

The lease liability is remeasured with a corresponding adjustment to the rights-of-use asset, or is recorded in profit or loss if the carrying amount of the rights-of-use asset has been reduced to zero.

When the Group is the (intermediate) lessor

The accounting policy applicable to the Group as a lessor in the comparative period was the same under IAS 17 except for subleases, when the Group acts as an intermediate lessor.

Subleases

When the Group acts as an intermediate lessor, it accounts for its interest in the head lease and the sub-lease separately. The classification of the sub-lease is assessed with reference to the rights-of-use asset of the head lease, and not the underlying asset. If a head lease is a short-term lease, and the exemption below has been applied, the sub–lease is classified as an operating lease. If the sub-lease is classified as a finance lease, the Group derecognises the rights-of-use asset and instead recognises a finance lease receivable at the amount of its net investment, which is the present value of all remaining lease payments. Any difference between the rights-of-use asset and the finance lease receivable is recognised in profit or loss, when the finance lease receivable is recognised. Lease liability relating to the head lease is retained in the Consolidated Statement of Financial Position, which represents the lease payments owed to the head lessor.

For any arrangements that contain lease and non-lease components, as an intermediate lessor, the Group allocates the consideration in the contract based on a relative stand-alone selling basis.

Subsequent to initial recognition, the Group, as intermediate lessor, accrues interest income on the net investment. The receipts under the lease are allocated between the receivable and the finance income to produce a constant rate of return on the net investment.

The Company, as a lessor, assesses the risk with respect to leased assets as limited and not material. Lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes. Any allowances for expected credit losses are recognised against finance lease receivables as required by IFRS 9, if applicable.

Key accounting estimate and judgement

Discount rates

The Group cannot readily determine the interest rate implicit in the lease, therefore, it uses its incremental borrowing rate (IBR) to measure lease liabilities. The IBR is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. Therefore, the IBR reflects what the Group 'would have to pay', which requires estimation when no observable rates are available (such as for subsidiaries that do not enter into financing transactions) or when they need to be adjusted to reflect the terms and conditions of the lease (for example, when leases are not in the subsidiary's functional currency). The Group estimates the IBR using observable inputs (such as market interest rates) when available and is required to make certain entity-specific estimates when applicable (such as the subsidiary's stand-alone credit rating). A single IBR may be applied to a portfolio of leases, which are similar in nature and lease term.

Determining the term of a lease contract

Extension and termination options are included in most lease contracts held by the Group. These options are used to maximise operational flexibility in terms of managing the assets used in the Group's operations. The majority of extension and termination options held are exercisable only by the Group and not by the respective lessor.

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or to not exercise a termination option. Extension options (or period after termination option) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

For lease contracts, the following factors are normally the most relevant:

- Remaining useful live of the assets depending on the lease term of the lease contract;
- Remaining duration of long-term customer contracts;
- The amount of the penalties to terminate (or not to extend);
- Other factors, including historical lease durations and the costs and business disruption that are expected to be incurred to replace the leased asset.

The lease term is reassessed if an option is actually exercised (or not exercised) or the Group becomes obliged to exercise (or not exercise) it. The assessment of reasonable certainty is only revised if a significant event or a significant change in circumstances occurs, which affects this assessment, and that is within the control of the lessee.

No other material estimates and judgements are applied by the Group with regard to leases.

The Group leases various assets, including land, buildings, plant and equipment. Leases are negotiated on an individual basis and contain a wide range of different terms and conditions, including termination and renewal rights. The Group, as a lessor, only has finance leases.

The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

21.1 Right-of-use assets

USD'M	Freight	Storage	Land and buildings	Service stations	Other	Total
Balance at 1 October 2020	1,382.7	92.7	85.7	–	530.4	**2,091.5**
Additions/remeasurements	1,002.0	55.3	14.9	–	72.4	1,144.6
Acquired in business combination	138.6	45.2	261.2	174.9	0.6	620.5
Disposals	(169.1)	(2.9)	(0.5)	–	(4.3)	(176.8)
Impairment	–	(1.3)	–	–	(156.7)	(158.0)
Depreciation	(744.6)	(76.9)	(20.3)	–	(252.9)	(1,094.7)
Effect of movement in exchange rate	–	–	0.5	–	0.4	0.9
Other	(21.5)	2.2	(2.9)	–	2.3	(19.9)
Balance at 30 September 2021	1,588.1	114.3	338.6	174.9	192.2	**2,408.1**

USD'M	Freight	Storage	Land and buildings	Service stations	Other	Total
Balance at 1 October 2019	1,366.2	158.3	106.6	–	936.6	**2,567.7**
Additions/remeasurements	642.5	22.1	3.2	–	16.4	684.2
Disposals	(21.7)	(1.5)	(5.6)	–	–	(28.8)
Impairment	–	(9.6)	–	–	(94.2)	(103.8)
Depreciation	(604.6)	(92.8)	(20.4)	–	(300.9)	(1,018.7)
Effect of movement in exchange rate	–	1.3	2.3	–	0.8	4.4
Other	0.3	14.9	(0.4)	–	(28.3)	(13.5)
Balance at 30 September 2020	1,382.7	92.7	85.7	–	530.4	**2,091.5**

The 'Other' category mainly includes assets located in Corpus Christi, Texas, which enable the transportation, storing, processing and vessel loading of crude oil and crude oil products.

G. Notes to consolidated financial statements

21.2 Lease receivables

The following table sets out a maturity analysis of lease receivables at 30 September 2021 and 2020, showing the undiscounted lease payments to be received:

	2021 USD'M	2020 USD'M
Less than one year	–	43.7
Later than one year and less than five years	–	132.6
Later than five years	–	–
Total undiscounted lease receivables	**–**	176.3
Unearned finance income	–	(14.8)
Lease receivables included in the statement of financial position	**–**	161.5
Of which are:		
Current	**–**	37.4
Non-current	**–**	124.1

Lease receivables were due from Puma Energy. As a result of the business combination, the receivables have been eliminated in the Consolidated Financial Statements.

21.3 Lease liabilities

	2021 USD'M	2020 USD'M
Opening balance	**2,389.0**	2,765.0
Interest	91.1	114.7
Additions/remeasurements	1,159.6	689.9
Effect of business combination	373.4	–
Disposals	(184.6)	(28.8)
Payments	(1,253.0)	(1,139.2)
Effect of movement in exchange rate	(0.8)	4.7
Other	(2.4)	(17.3)
Closing balance	**2,572.3**	2,389.0
Current	925.4	981.6
Non-current	1,646.9	1,407.4
Closing balance	**2,572.3**	2,389.0

The following table sets out a maturity analysis of the lease liabilities at 30 September 2021 and 2020, indicating the undiscounted lease amounts to be paid:

	2021 USD'M	2020 USD'M
Less than one year	1,033.7	1,065.0
Later than one year and less than five years	1,528.3	1,216.4
Later than five years	1,186.7	367.0
Total undiscounted lease payable	**3,748.7**	2,648.4
Future finance costs	(1,176.4)	(259.4)
Lease liabilities included in the statement of financial position	**2,572.3**	2,389.0

21.4 Amounts relating to leases recognised for the reporting period

The following amounts are recognised in profit and loss:

	2021 USD'M	2020 USD'M
Depreciation on right-of-use assets	1,094.7	1,018.7
Interest expense on lease liabilities	91.1	114.7
Impairments of right-of-use assets	158.0	103.7
Expenses relating to short-term leases	623.7	102.8
Expenses related to variable lease payments not included in the measurement of the lease liability	508.0	341.6
(Income) from subleasing right-of-use assets	(5.7)	(7.9)
Gain or losses on sale and leaseback	8.3	9.5
Foreign exchange/other	(5.3)	1.6
Net (income)/expenses related to leases	**2,472.8**	1,684.7

At 30 September 2021, the Group is committed to USD63.4 million of short-term lease payments (30 September 2020: USD201.0 million).

The following amounts are recognised with regard to lease liabilities and lease receivables together in the Consolidated Statement of Cash Flow:

	2021 USD'M	2020 USD'M
Cash outflow for leases – included in net cash from/(used in) operating activities	(96.8)	(107.1)
Cash outflow for leases – included in net cash from/(used in) financing activities	(1,044.8)	(999.0)
Total	**(1,141.6)**	(1,106.1)

22. Equity-accounted investees

Accounting policy

Associates and joint ventures (together 'Associates') in which the Group exercises significant influence or joint control are accounted for using the equity method. Significant influence is the power to participate in the financial and operating policy decisions of the investee but not control these policies. Joint control is established by contractual agreement and requires unanimous consent for strategic financial and operating decisions. The considerations made in determining significant influence or joint control are similar to those necessary to determine control over subsidiaries.

Under the equity method, the investment in an Associate is initially recognised at cost. The carrying amount of the investment is adjusted to recognise changes in the Group's share in the net assets of the Associate since acquisition date. Goodwill relating to the Associate is included in the carrying amount of the investment and is neither amortised nor individually tested for impairment. The Consolidated Statement of Income reflects the Group's share of the results of operations of the Associate. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognised directly in the equity of the Associate, the Group recognises its share of any changes, when applicable, in the Consolidated Statement of Changes in Equity.

Unrealised gains and losses resulting from transactions between the Group and the Associate are eliminated to the extent of the interest in the Associate, unless the sale or contribution of assets constitute a business in which case the gains and losses are recognised in full. The aggregate of the Group's share of profit or loss of equity-accounted investees is shown on the face of the Consolidated Statement of Income and represents profit or loss after tax and non-controlling interests in the subsidiaries of the Associate.

The Group determines at each reporting date whether there is any objective evidence that the investment in the Associate is impaired. The financial statements of the Associates are prepared for the same reporting period as the Group, unless otherwise indicated.

Changes in the Group's interest in Associates are accounted for as a gain or loss on disposal with any differences between the amount by which the carrying amount of the Associate is adjusted and the fair value of the consideration received being recognised directly in the Consolidated Statement of Income.

Key accounting estimate and judgement

Determination of control of subsidiaries and joint arrangements

Judgement is required to determine whether the Group controls an entity, and consequently, whether it needs to consolidate that entity into the consolidated financial statements. Specifically, the Group assesses whether it has the power over the relevant activities of the entity, exposure to its variable returns or the ability to use power to impact returns of the entity.

The Group has certain investments in companies, which are not consolidated and whose results are accounted for in the Group's consolidated financial statements based on their equity share ownership. The most significant of the Group's investments is the 50 percent investment in Impala Terminals Holding S.à r.l.

	2021 USD'M	2020 USD'M
Opening balance	**2,438.6**	3,416.5
Acquisition through business combination	51.4	–
Effect of movements in exchange rates	26.0	(121.7)
Additions	155.5	94.5
Disposals	(414.4)	(27.1)
Impairments	(26.3)	(524.2)
Share of net profit/(loss)	(110.8)	(327.0)
Dividends received	(164.3)	(4.9)
Effect of business combination	(956.4)	–
Reclassification to assets held for sale	(141.0)	–
Other	(14.7)	(67.5)
Total	**843.6**	2,438.6

22.1 Financial year 2021

The additions to equity-accounted investees amounted to USD155.5 million. In the financial year, the Group participated for its share in an equity contribution in Tendril Ventures Pte. Ltd. (Tendril Ventures) resulting in an additional investment (USD52.3 million). Other additions include an investment in Sawtooth Caverns LLC (USD49.6 million), Trafigura Liaoning Port International Trading (Liaoning) Co. Ltd. (USD30.8 million) and various other investments.

For the disposals of equity-accounted investees during the financial year ended 30 September, such as Minas de Aguas Tenidas SA (MATSA), see Note 15.

The share of net loss from investments amounts to USD110.8 million. This is predominantly the result of losses in Puma Energy (USD165.9 million) and Porto Sudeste do Brasil (USD69.6 million), partly offset by USD108.2 million profits from MATSA, Atalaya Mining PLC and Impala Terminals Group S.à r.l.

During FY2021, the Group received USD164.3 million in dividends from its investments in equity-accounted investees, which mainly relates to MATSA (USD136.4 million) and Sawtooth Caverns LLC (USD24.3 million).

G. Notes to consolidated financial statements

22.2 Financial year 2020

The effect of movements in exchange rates of USD121.7 million includes a negative foreign currency translation impact from Puma Energy Holdings Pte. Ltd. (Puma Energy) of USD83.0 million and a negative foreign currency translation impact of USD22.9 million from Tendril Ventures Pte. Ltd. (Tendril Ventures), which indirectly holds shares in Nayara Energy Limited. This foreign exchange movement is included in the other comprehensive income line share of comprehensive income/(loss) from associates.

Puma Energy agreed to a shareholding restructuring transaction with Trafigura and Cochan Holdings. Cochan Holdings reduced its stake in Puma Energy from 15 percent to less than 5 percent, by selling shares in Puma Energy to Trafigura. Hereafter, Puma Energy bought back and cancelled these shares. Puma Energy funded the re-purchase with a subordinated shareholder loan from Trafigura with an initial tenor of seven years. The parties completed the transaction in June 2020. As a result of this transaction, Trafigura's shareholding in Puma Energy increased to 55.5 percent.

Based on agreement between the shareholders, the power to direct the relevant activities of Puma Energy lies solely with its Board of Directors, and shareholders' rights are only protective in nature. Trafigura appoints three out of eight directors, and decisions by Puma Energy's Board of Directors are taken by simple majority. Trafigura therefore does not have the majority of decision-making power in the Board of Directors. The transaction did not alter the existing shareholder agreement. Therefore, the increase in Trafigura's shareholding did not result in Trafigura gaining control over Puma Energy. Consequently, the equity investment in Puma Energy will continue to be accounted for under the equity method.

During 2020, the additions to equity-accounted investees amounted to USD94.5 million. In the financial year, the Group participated for its share in an equity contribution in Tendril Ventures resulting in an additional investment of USD44.3 million. Other main additions related to a new investment in a natural gas and power company focusing on the Italian market of USD11.4 million and an investment in Bluewater Texas Terminals of USD22.6 million.

The share of net loss from investments amounted to USD327.0 million. This was predominantly the result of losses in Puma Energy (USD326.1 million) and Porto Sudeste do Brasil (USD46.6 million), partly offset by profits from MATSA, Guangxi Jinchuan and Impala Terminals Group S.à r.l. of USD37.8 million. The carrying value of the equity investment in Puma Energy amounted to USD1,122 million as at 30 September 2020.

During the 2020 financial year, there were negative market developments in the economic environment in which some of our equity-accounted investees operate. This resulted in impairments on our investments in Puma Energy and Tendrill Ventures (Nayara). Details of the impairment analysis are disclosed in Note 14.

Other reductions primarily includes the negative movements on cash flow hedges of equity-accounted investees, including USD23 million relating to Puma Energy.

22.3 Equity-accounted investee related balances and participations

The tables below depict participations and balances related to equity-accounted investees:

Name	Place of incorporation/registration	Activities	Percentage of equity attributable to the Group 2021	Percentage of equity attributable to the Group 2020
Atalaya Mining PLC	Cyprus	Mining	22.4%	22.4%
Bluewater Texas Terminals LLC (BWTT)	United States	Terminal	50.0%	50.0%
Empresa Minera del Caribe S.A. (joint venture)	Caribbean	Mining	49.0%	49.0%
Guangxi Jinchuan Non-ferrous Metals Co., Ltd	China	Smelter	30.0%	30.0%
Impala Terminals Group S.à r.l. (joint venture)	Luxembourg	Multimodal logistics and warehousing	50.0%	50.0%
Minas de Aguas Tenidas, S.A. (MATSA)	Spain	Mining	–	50.0%
Mineração Morro do Ipê S.A. (joint venture)	Brazil	Mining	50.0%	50.0%
Nyrstar N.V.*	Belgium	Formerly mining, metal processing	24.4%	24.4%
Porto Sudeste do Brasil S.A. (joint venture)	Brazil	Port services	49.6%	49.6%
Puma Energy Holdings Pte. Ltd.**	Singapore	Mid- and downstream oil activities	–	55.5%
Sawtooth Caverns LLC	United States	Storage of oil products	50.0%	–
Tendril Ventures Pte. Ltd. ***	Singapore	Oil refinery, terminal and retailing of fuel	–	49.8%
Trafigura Liaoning Port International trading (Liaoning) Co. Ltd.	China	Oil trading	50.0%	–
Transportadora Callao S.A.	Peru	Transportation	30.0%	30.0%

* Listed entity that formerly held the Nyrstar operating activities.

** Puma Energy is consolidated as per 30 September 2021 – refer to Note 7.

*** Investment reclassified to Assets held for sale, refer to Note 30.

Name	Segment	2020 USD'M	2019 USD'M
Energy			
Puma Energy Holdings Pte. Ltd.	Energy	–	1,122.0
Tendril Ventures Pte. Ltd.	Energy	–	89.0
Trafigura Liaoning Port International trading (Liaoning) Co. Ltd.	Energy	30.8	–
Sawtooth Caverns LLC	Energy	25.9	–
Others	Energy	60.6	28.9
Total		**117.3**	1,239.9
Metals and Minerals			
Minas de Aguas Tenidas, S.A. (MATSA)	Metals and Minerals	–	459.8
Impala Terminals Group S.à r.l.	Metals and Minerals	286.9	274.6
Guangxi Jinchuan Non-ferrous Metals Co., Ltd	Metals and Minerals	202.0	178.7
Atalaya Mining PLC*	Metals and Minerals	117.5	95.4
Porto Sudeste do Brasil S.A.	Metals and Minerals	21.2	81.7
Empresa Minera del Caribe S.A.	Metals and Minerals	35.6	39.7
Mineração Morro do Ipê S.A.	Metals and Minerals	34.1	23.8
Nyrstar N.V.*	Metals and Minerals	–	–
Others	Metals and Minerals	10.9	14.2
Total		**708.2**	1,167.9
All other segments			
Others	Corporate and others	18.1	30.8
Total		**843.6**	2,438.6

* Listed investments. Fair value as of 30 September 2021 (and 2020):

Atalaya Mining PLC	130.3	65.6
Nyrstar N.V.	11.2	3.5

As at 30 September 2021, Tendril Ventures has been reclassified to Assets held for sale.

Only the individually significant associates Puma Energy, MATSA, and Impala Terminals Group S.à r.l. are shown separate from the other associates.

	Puma Energy Holdings Pte. Ltd.*		Minas de Aguas Tenidas, S.A. (MATSA)		Impala Terminals Group S.à r.l.	
	2021 USD'M	2020 USD'M	**2021 USD'M**	2020 USD'M	**2021 USD'M**	2020 USD'M
Non-current asset assets	–	3,409.7	–	1,472.4	545.1	506.6
Current assets	–	2,257.5	–	120.1	159.5	178.6
Non-current liabilities	–	2,751.6	–	386.3	201.1	222.6
Current liabilities	–	3,296.0	–	286.5	136.8	120.9
Revenue	12,136.5	12,980.1	790.1	496.6	510.3	477.4
Profit/(loss) for the year	(224.0)	(691.2)	142.1	14.6	28.9	17.6
Dividends paid	–	–	(272.9)	–	(2.1)	–
Other comprehensive income	15.8	(228.7)	4.4	1.6	29.3	(6.4)
Total comprehensive income	(208.2)	(919.8)	146.5	16.2	58.2	11.2
Net assets	–	(380.4)	–	919.7	366.7	341.7
Trafigura's ownership interest	n/a	55.5%	–	50.0%	50.0%	50.0%
Fair value adjustment as a result of partial sale and other adjustments	–	1,333.3	–	–	103.6	103.9
Carrying value	–	1,122.0	–	459.8	286.9	274.7

* Puma Energy is consolidated as per 30 September 2021 – see Note 7.

Other associates	2021 USD'M	2020 USD'M
Assets	2,705.6	4,048.9
Liabilities	2,250.6	3,552.9
Revenue	2,507.8	1,420.6
Profit or (loss) for the year	(23.7)	(57.9)

Corporate guarantees in favour of associates and joint ventures as at 30 September 2021 amount to USD93.7 million (30 September 2020: USD124.7 million).

G. Notes to consolidated financial statements

23. Prepayments and financial assets

Accounting policy

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Prepayments

The Group enters into prepayment agreements where purchases of commodities are prepaid. When the prepayment agreement can be settled in cash or another financial asset, it is classified at amortised cost in line with IFRS 9. When settlement of the prepayment agreement solely occurs by having the commodities physically delivered, these agreements are not classified as financial instruments as they do not meet the definition of a financial asset. For the clauses in the contracts which might result in cash settlement instead of physical delivery, the objective of the contract and the economic reality of such clauses determine the classification. Interest received on prepayment agreements is presented in finance income in the Consolidated Statement of Income.

Financial assets

Financial assets are classified, at initial recognition, as subsequently measured at amortised cost, fair value through other comprehensive income (OCI) and fair value through profit or loss.

The classification depends on the Group's business model for managing the financial assets and the contractual terms of the cash flows. For investments in debt instruments, this will depend on the business model in which the investment is held. For investments in equity instruments, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income.

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the asset.

The Group reclassifies debt investments only when its business model for managing those assets changes. Reclassification takes place on the first day of the financial year following the financial year in which the business model changes.

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss as incurred.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e. the date that the Group commits to purchase or sell the asset.

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in such transferred financial assets that is created or retained by the Group is recognised as a separate asset or liability.

Financial assets at fair value through other comprehensive income

Financial assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment losses, interest revenue and foreign exchange gains and losses, which are recognised in profit or loss. Where Group management has elected to present fair value gains and losses on equity investments in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to the Consolidated Statement of Income. Dividends from such investments continue to be recognised in the Consolidated Statement of Income as income/(expenses) from investments when the Group's right to receive payments is established. There are no impairment requirements for equity investments measured at fair value through other comprehensive income.

Financial assets at fair value through profit or loss

The Group classifies the following financial assets at fair value through profit or loss:

- Equity investments that are held for trading;
- Equity investments for which the entity has not elected to recognise fair value gains and losses through other comprehensive income;
- Debt investments that do not qualify for measurement at amortised cost;
- Debt investments that do not qualify for measurement at fair value through other comprehensive income; and
- Debt investments that have been designated at fair value through profit or loss.

Financial assets at fair value through profit or loss are carried in the Consolidated Statement of Financial Position at fair value with net changes in fair value presented as services and other expenses in the Consolidated Statement of Income. Interests, dividends and gain or loss on foreign exchange on financial assets at fair value through profit or loss are included separately in finance income or expense, or services and other expenses, respectively.

Amortised cost

The Group classifies its financial assets as at amortised cost only if both of the following criteria are met:

- The asset is held within a business model with the objective of collecting the contractual cash flows; and
- The contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding.

Financial assets at amortised cost include loans receivable, trade and other receivables, and other financial assets that are held with the objective of collecting contractual cash flows. After initial measurement at fair value, the financial assets are measured at amortised cost using the EIR method, less impairment.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the Consolidated Statement of Income. The losses arising from impairment are recognised in the Consolidated Statement of Income in impairments of financial assets and prepayments.

Key accounting estimate and judgement

Determination of control of a structured entity

A structured entity is as an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements.

Structured entities are usually characterised to have quite a limited range of relevant activities after their initial set-up and design. Due to the specifics of a structure, the role of setting up the entity and deciding on its design (evaluating the transaction terms and features) can provide the investor with rights that are sufficient to give it power over the investee. However, being involved in the design of an investee alone is not sufficient to give an investor control.

The Group incorporated a structured entity during the year that subsequently acquired a 10 percent participatory equity interest in Vostok Oil LLC. Judgement was required in determining whether the Group had control over the structured entity. The objective of this assessment was to determine whether or not the structured entity should be consolidated by the Group.

The board of the structured entity consist of persons independent of the Group and the Group does not have the power to direct the relevant activities performed by the structured entity. The Group, acting as in investor in the structured entity, has no power over the investee which it could use to influence variable returns from the structured entity. In the absence of control over the structured entity, it is not consolidated in the Group's financial statements.

23.1 Prepayments

	2021 USD'M	2020 USD'M
Current	**1,736.8**	2,934.5
Non-current	**1,804.6**	1,061.0
Total	**3,541.4**	3,995.5

Prepayments relate to prepayments of commodity deliveries and are split into non-current prepayments (due > 1 year) and current prepayments (due < 1 year). A significant portion of non-current prepayments and current prepayments are either financed on a non-recourse basis or insured.

Under the prepayments category, the Group accounts for the prepayments of commodity deliveries. Out of the total current prepayments balance, an amount of USD0.9 billion (30 September 2020: USD0.7 billion) relates to prepayments that are made for specifically identified cargos.

The contractually outstanding prepayments amount decreases in size with each cargo that is delivered, until maturity. Once the contractually agreed total cargo has been fully delivered, the prepayment agreement falls away leaving no remaining contractual obligations on Trafigura or the supplier.

The Group monitors the commodity prices in relation to the prepayment contracts and manages the credit risk together with its financial assets as described in Note 40. A portion of long-term prepayments and short-term prepayments is on a limited recourse basis. Interest on the prepayments is added to the prepayment balance.

Last year's decrease in demand for commodity products as a result of COVID-19 resulted in an increased credit risk towards our suppliers. Therefore, the Group calculated expected credit losses on the outstanding prepayments as from FY2020 onwards. The methodology of the expected credit loss calculation is similar to the methodology used in the expected credit loss calculations on loans receivable.

Based upon the individual analysis of the prepayments, the cumulated expected credit losses on these prepayments recorded by the Group amount to USD124.1 million (30 September 2020: USD143.8 million). The following table explains the movements of the expected credit loss between the beginning and the end of the reporting period and the gross carrying amounts of the prepayments by credit risk category:

	2021			2020		
	Performing 12-months ECL USD'M	**Under-performing Life-time ECL USD'M**	**Total USD'M**	Performing 12-months ECL USD'M	Under-performing Life-time ECL USD'M	Total USD'M
Expected credit loss (ECL) provision						
Opening balance – 1 October	40.3	103.5	143.8	–	–	–
Transfer to under-performing	(0.3)	0.3	–	–	–	–
ECL on prepayments recognised during the year	0.4	21.6	22.0	40.3	103.5	143.8
ECL on prepayments derecognised during the year	(13.7)	(25.6)	(39.3)	–	–	–
Changes in PD/LGD/EAD	(2.0)	(0.4)	(2.4)	–	–	–
Closing balance 30 September	**24.7**	**99.4**	**124.1**	40.3	103.5	143.8
Carrying amount 30 September						
Current	1,434.5	302.3	1,736.8	1,553.9	1,380.6	2,934.5
Non-current	687.7	1,116.9	1,804.6	688.9	372.1	1,061.0
Total	**2,122.2**	**1,419.2**	**3,541.4**	2,242.8	1,752.7	3,995.5

G. Notes to consolidated financial statements

23.2 Loans and other receivables

	2021 USD'M	2020 USD'M
Loans to associates and related parties	62.9	453.2
Other non-current loans receivable	299.5	241.2
Total	**362.4**	694.4

Loans to associates and related parties include a loan receivable to a Galena investment fund (USD39.8 million).

Other non-current loans receivables include various loans that are granted to counterparties that the Group trades with. This line also includes the debt agreement with the Angolan Ministry of Finance that relates to compensation for iron ore investments made by the Group following the liquidation of a consolidated Angolan subsidiary in 2016. In 2019, the original debt agreement has been renegotiated with a new redemption schedule in place. Over the years, due to the economic situation in Angola with collapsing oil prices in previous year, lack of liquidity and COVID-19, it has not been possible for the Angolan Ministry of Finance to honour all of its obligations. The Angolan Ministry of Finance has advised the Group that they are actively seeking to start regular payments of the debt. In addition, this line includes a loan related to Prony Resources New Caledonia (USD34.0 million).

Based upon the individual analysis of these loans, the recorded expected credit losses on these loans amount to USD136.6 million (30 September 2020: USD121.9 million). The following table explains the movements of the expected credit loss between the beginning and the end of the reporting period and the gross carrying amounts of the loan receivables by credit risk category:

	2021			2020		
	Performing 12-months ECL USD'M	Under-performing Life-time ECL USD'M	Total USD'M	Performing 12-months ECL USD'M	Under-performing Life-time ECL USD'M	Total USD'M
Expected credit loss (ECL) provision						
Opening balance – 1 October	4.6	117.4	121.9	2.6	4.5	7.1
Transfer to under-performing	(0.3)	0.3	–	(2.6)	2.6	–
ECL on new loans originated during the year	1.4	–	1.4	4.2	3.3	7.5
ECL on loans derecognised during the year	(3.3)	(3.0)	(6.3)	–	–	–
Changes in PD/LGD/EAD	–	19.5	19.5	0.3	107.0	107.3
Closing balance 30 September	**2.4**	**134.2**	**136.6**	4.6	117.4	121.9
Carrying amount 30 September						
Current (Note 26)	107.1	166.0	273.1	302.8	–	302.8
Non-current (Note 23)	88.3	274.1	362.4	393.9	300.5	694.4
Total	**195.4**	**440.1**	**635.5**	696.7	300.5	997.2

23.3 Other investments

Investments included in the Consolidated statement of financial positions as at 30 September 2021 and 2020 can be broken down as follows:

	2021 USD'M	2020 USD'M
Listed equity securities – fair value through OCI	2.7	3.9
Listed equity securities – fair value through profit or loss	68.7	25.3
Listed debt securities – fair value through profit or loss	277.3	220.9
Unlisted equity investments – fair value through profit or loss	133.5	34.3
Unlisted equity investments – fair value through OCI	242.4	232.7
Other investments – fair value through profit or loss	862.2	–
Total	**1,586.8**	517.1

The Group's long-term investments consist of listed equity securities, listed debt securities and unlisted equity securities. The listed equity securities have no fixed maturity or coupon rate. The fair values of listed equity investments are based on quoted market prices, while the fair value of the unlisted equity securities is determined based on a Level 3 valuation as prepared by management.

The increase in the listed equity securities (fair value through profit or loss) is primarily resulting from the investment in Saras (USD27.9 million), an Italian refinery and energy company, together with multiple other smaller investments.

23.3.1 Acquisition of 10% participatory equity interest in Vostok Oil LLC

On 24 December 2020, the Group entered into a transaction consisting of an investment in a 100 percent owned structured entity that subsequently acquired a 10 percent participatory equity interest in Vostok Oil LLC from Rosneft, and other contractual agreements including supply contracts. Vostok Oil LLC is an oil and gas company incorporated in the Russian Federation. The transaction builds on the longstanding commercial relationship between Trafigura and Rosneft, providing access to long-term off-take supply of crude oil including from Vostok Oil.

The structured entity is governed by an independent board of directors and as a result the Group does not have the ability to use its power to influence the variable returns from the structured entity. As a consequence, the structured entity is not consolidated in the Group's consolidated financial statements.

The Group made an initial contribution of EUR1.5 billion of equity to the structured entity in cash. Additional debt funding was attracted by the structured entity to finance the acquisition of the 10 percent participatory equity interest for a total consideration of EUR7.0 billion. The principal activity of the structured entity is that of a holding and trading company.

The initial equity investment in the structured entity and the associated agreements are considered as a single unit-of-account and classified under Other Investments on the Consolidated Statement of Financial Position.

As the Group does not control the structured entity, the Other investment qualifies as a financial instrument classified as fair value through profit or loss. The main level 3 inputs used by the Group are derived as follows:

- Discount rate using weighted average use of capital asset pricing model reflecting the Group's own capital structure and time value of money;
- Risk adjustment to factor in exposures relating to the counterparties, as well as the specific terms of commercial contracts;
- Market volatility in oil price estimated based on the Group's knowledge of the business.

A change in discount rate by 0.5 percentage points has an impact of minus USD15.1 million/plus USD15.2 million on the valuation as at 30 September 2021.

The net value of the investment as a single unit of account as at 30 September 2021 amounts to USD862.2 million (30 September 2020: nil), and accounts for value of the investment and associated agreements.

24. Other non-current assets

	2021 USD'M	2020 USD'M
Non-financial hedged items	605.6	76.9
Restricted deposits	133.3	68.0
Other	164.7	47.1
Total	**903.6**	192.0

For further information on the non-financial hedged items, refer to Note 41.2. The restricted deposits mainly represent amounts placed on deposit accounts relating to Puma Energy and Nyrstar mining operations.

25. Inventories

Accounting policy

Trading-related inventories are measured at fair value less costs to sell. Fair value movements are included in the Consolidated Statement of Income in materials, transportation and storage. Inventories of non-trading related products, including work-in-progress, are measured at the lower of cost or net realisable value. Costs comprise all costs of purchases and other costs incurred.

Carbon emission allowances

Allowances held for trading

Allowances held for trading are acquired to take advantage of market fluctuations. These allowances are classified as inventory at fair value less costs to sell. When there is an active market fair value is based on quoted prices (level 1), otherwise fair value measurement is derived from an observable market price (level 2). The change in fair value observed over the year is recorded in the income statement.

Allowances held for own use

Carbon emission allowances held for own use are acquired with the purpose of 'voluntary' settling emissions in the ordinary course of business. These allowances are classified as intangible assets at cost less accumulated impairment losses. As carbon dioxide is emitted during a voyage, a 'voluntary' obligation to deliver emission allowances arises. This obligation is reported as an expense and a liability or a decrease of the current intangible asset. This liability is valued in the amount at which it is expected to be settled.

	2021 USD'M	2020 USD'M
Storage inventories	17,785.9	13,670.1
Floating inventories	10,906.3	6,103.6
Work-in-progress inventories	592.2	391.2
Supplies	369.1	12.7
Total	**29,653.5**	20,177.6

As at 30 September 2021 (and 30 September 2020), all inventory except the item 'Supplies' has either been pre-sold or hedged. Part of the inventory has been pledged for securitisation purposes. Refer to Note 27.2.

Work-in-progress inventories fully relate to inventories being processed in the Nyrstar smelters.

G. Notes to consolidated financial statements

26. Trade and other receivables

Accounting policy

Trade receivables

Trade receivables are amounts due from customers for services rendered in the ordinary course of business. Trade and other receivables are recognised initially at fair value. The Group holds trade receivables with the primary objective to collect the contractual cash flows, which are subsequently measured at amortised cost using the effective interest method, except for those subject to certain dedicated financing facilities, which would be held for collection of contractual cash flows and for selling the financial asset and therefore should be measured at fair value through other comprehensive income. As trade receivables are generally due for settlement within 30 days both measurement methods would result in the same carrying value as the amortised cost would approximate the fair value.

The group applies the simplified approach to measuring expected credit losses that uses a lifetime expected loss allowance for all trade receivables and contract assets.

Trade receivables are written off (impaired) when objective evidence indicates that there is no reasonable expectation of recovery. This is based on an individual review for impairment due to an increase of the credit risk of the customer, past due amounts and taking into account any retention right on product stored for this customer.

The creation and release of a provision for impaired trade receivables are recognised under 'Services and other' in the Consolidated Statement of Income.

Provisional pricing features

Trade and other receivables and trade and other payables related to commodity contracts, including provisional pricing features, are measured at fair value through profit or loss applying a Level 2 valuation. The related net changes in fair value are presented under material, transportation and storage.

Accrued turnover

Accrued turnover relates to sales made before the end of the year that have not been invoiced at the balance sheet date. Reasons for such delays include the need to determine final pricing, quantity and quality analysis. All are typical of the industry in which the Group operates.

	2021 **USD'M**	2020 USD'M
Trade debtors	11,917.9	6,286.7
Provision for bad and doubtful debts	(110.9)	(47.8)
Accrued turnover	8,220.1	5,539.8
Broker balances	1,707.1	1,571.4
Other debtors	1,888.2	309.0
Loans to third parties	273.1	294.9
Loans to related parties	–	7.9
Other taxes	619.0	438.0
Related parties	233.6	845.2
Total	**24,748.1**	15,245.1

All financial instruments included in trade and other receivables are held to collect the contractual cash flows. Furthermore, the cash flows that the Group receives on these instruments are solely payments of principal and interest except for trade and other receivables related to contracts, including provisional pricing features.

The Group entered into a number of dedicated financing facilities, which finance a portion of its receivables. Part of these facilities meet the criteria of derecognition of the receivables according to IFRS.

As per 30 September 2021, an amount of USD7,690.6 million (30 September 2020: USD2,513.3 million) of trade debtors has been discounted. Of this amount, USD7,152.4 million (30 September 2020: USD2,318.9 million) has been derecognised, as the Group has transferred substantially all the risks and rewards of ownership of the financial asset with non-recourse. The remaining part of discounted receivables that does not meet the criteria for derecognition amounting to USD538.2 million (30 September 2020: USD194.4 million) continues to be recognised as trade debtors. For the received amount of cash of these items the Group has recognised a liability under current loans and borrowings.

Of USD11,917.9 million trade debtors (30 September 2020: USD6,286.7 million), USD5,069.6 million had been sold on a non-recourse basis under the securitisation programme (30 September 2020: USD1,950.1 million). Of the USD233.6 million receivables on related parties (30 September 2020: USD845.2 million), USD103.8 million had been sold on a non-recourse basis under the securitisation programme (30 September 2020: USD309.6 million). See Note 27.

As at 30 September 2021, 8.4 percent (30 September 2020: 7.3 percent) of receivables were between 1-60 days overdue, and 5.4 percent (30 September 2020: 8.5 percent) were more than 60 days overdue. Trafigura applied the simplified method in assessing expected credit losses. The accounts receivables have been divided in aging buckets and based on an analysis on historical defaults and recovery rates, and considering forward looking information, a percentage for expected credit losses has been determined. Trafigura manages to limit credit losses by renegotiating contracts in the case of a default.

From the above analysis, an expected credit loss as at 30 September 2021 of USD4.2 million (30 September 2020: USD6.0 million) has been recorded. The loss allowance provision as at 30 September 2021 amounts to USD110.9 million (30 September 2020: USD40.7 million). The provision mostly relates to demurrage claims and commercial disputes with our clients. Accrued turnover represents receivable balances for sales which have not yet been invoiced. They have similar risks and characteristics as trade debtors. Trade debtors and accrued turnover have similar cash flow characteristics and are therefore considered to be a homogeneous group of financial assets.

Total trade and other receivables related to contracts, including provisional pricing features, amount to USD8.0 billion (30 September 2020: USD6.5 billion).

Included in other debtors is the amount due from Sandfire Resources Limited in relation to the sale of MATSA (USD727.1 million). Refer to Note 15. The remainder of other debtors primarily relate to swap margin payments.

27. Securitisation programmes

The Group operates various securitisation programmes. Trafigura Securitisation Finance plc. (TSF) and Argonaut Receivables Company S.A. (Argo) enable the Group to sell eligible receivables, and an inventory securitisation programme, through Trafigura Commodities Funding Pte. Ltd. (TCF) and Trafigura Global Commodities Funding Pte. Ltd. (TGCF), enables Trafigura to sell and repurchase eligible inventories. These securitisation vehicles are consolidated and consequently the securitised receivables and inventories are included within the consolidated trade debtor and inventory balances.

27.1 Receivables securitisation

Over time the external funding of TSF has increased significantly in size, mostly through Variable Funding Notes (VFN) purchased by bank-sponsored conduits, while incorporating a longer-term committed funding element in the form of Medium Term Notes (MTN).

Argonaut receivables was launched in May 2020 and is funded through short-term VFN only.

The available external funding of the receivables securitisation programmes consists of:

	Interest rate	Maturity	2021 USD'M	2020 USD'M
TSF AAA MTN	Libor +0.53%	2024 – July	139.5	185.0
TSF AAA MTN	1.08%	2024 – July	139.5	280.0
TSF BBB MTN	1.78%	2024 – July	21.0	35.0
TSF AAA VFN	See Note	Various throughout the year	4,170.6	2,519.9
TSF BBB VFN	See Note	Various throughout the year	313.8	189.5
Argonaut Receivables Securitisation		2022 – April	300.0	225.0
TSF senior subordinated debt		2023 – March	119.1	91.6
Total			**5,203.5**	3,526.0

As at 30 September 2021, the maximum available amount of external funding was USD5,203.5 million (30 September 2020: USD3,526.0 million) for the receivable securitisation programme.

The rate of interest applied to the TSF AAA VFN is principally determined by the demand for commercial paper issued by 10 bank-sponsored conduits. The Group benchmarks the rate provided against 1-week Libor. In the case of the rate of interest applicable to the TSF BBB VFN, the rate of interest is principally determined by the liquidity of the interbank market.

The maturity of the TSF AAA and BBB VFNs has been staggered to diversify the maturity profile of the Notes. This is aimed at mitigating the 'liquidity wall' risk associated with a single maturity date for a significant funding amount.

27.2 Inventory securitisation

The available external funding of the inventory securitisation programmes consists of:

	Interest rate	Maturity	2021 USD'M	2020 USD'M
TCF/TGCF VFN	See Note	2020 – November	–	410.0
TCF/TGCF MLF	See Note	2020 – November	–	40.0
TCF/TGCF VFN	See Note	2021 – November	455.0	–
TCF/TGCF MLF	See Note	2021 – November	45.0	–
Total			**500.0**	450.0

As at 30 September 2021, the maximum available amount of external funding was USD500.0 million (30 September 2020: USD450.0 million) for the inventory securitisation programme.

The rate of interest applied to the VFN and Margin Liquidity Facilities (MLF) under the inventories securitisation is defined in the facility documentation.

28. Other current assets

	2021 USD'M	2020 USD'M
Non-financial hedged items	2,154.7	64.5
Prepaid expenses	322.4	278.1
Other	8.9	8.6
Total	**2,486.0**	351.2

See Note 41.2 for further information on the non-financial hedged items. Prepaid expenses relate to prepayments other than those made for physical commodities.

29. Cash and cash equivalents and deposits

Accounting policy

Cash and short-term deposits in the Consolidated Statement of Financial Position comprise cash at banks and on hand and short-term highly liquid deposits with a maturity of three months or less, which are readily convertible to a known amount of cash and subject to an insignificant risk of changes in value.

For the purpose of the Consolidated Statement of Cash Flows, cash and cash equivalents consist of all cash on hand and short-term highly liquid investments such as deposits with original maturities of three months or less.

	2021 USD'M	2020 USD'M
Cash at bank and in hand	**9,234.9**	5,405.8
Short-term deposits	**1,442.6**	351.2
Cash and cash equivalents	**10,677.5**	5,757.0

Cash at bank earns interest at floating rates based on daily bank deposit rates. Short-term deposits are made for varying periods between one day and three months depending on the immediate cash requirements of the Group and earn interest at the respective short-term deposit rates. The fair value of cash and cash equivalents approximates the carrying value.

An amount of USD158.1 million (30 September 2020: USD43.4 million) of cash at bank is restricted, including restrictions that require the funds to be used for a specified purpose and restrictions that limit the purpose for which the funds can be used, unless fixed asset construction invoices are presented to the banks.

As at 30 September 2021, the Group had USD11.4 billion (30 September 2020: USD9.0 billion) of committed unsecured syndicated loans, of which USD2.5 billion (30 September 2020: USD3.8 billion) remained unutilised. The Group had USD5.4 billion (30 September 2020: USD3.3 billion) of immediately (same day) available cash in liquidity funds. Therefore, the Group had immediate access to available liquidity balances from liquidity funds and corporate facilities in excess of USD7.9 billion (30 September 2020: USD7.1 billion).

29.1 Deposits

Short-term deposits made for periods longer than three months are shown separately in the Consolidated Statement of Financial Position and earn interest at the respective short-term deposit rates.

G. Notes to consolidated financial statements

30. Assets classified as held for sale and discontinued operations

Accounting policy

Non-current assets and disposal groups are classified as held for sale if their carrying amounts will be recovered principally through a sales transaction rather than through continuing use. 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. Costs to sell are the incremental costs directly attributable to the disposal of an asset (disposal group), excluding finance costs and income tax expense.

The criteria for held for sale classification is regarded as met only when the sale is highly probable, and the asset or disposal group is available for immediate sale in its present condition. Actions required to complete the sale should indicate that it is unlikely that significant changes to the sale will be made or that the decision to sell will be withdrawn. Management must be committed to the plan to sell the asset and the sale expected to be completed within one year from the date of the classification.

At the moment an equity-accounted investee meets the criteria to be classified as held for sale, equity accounting is discontinued. An equity-accounted investee held for sale is measured at the lower of its existing carrying amount and fair value less costs to sell. In the situation where the equity-accounted investee ceases to be classified as held for sale, the equity method is applied retrospectively and comparative amounts disclosed for periods since the classification as held for sale are restated.

Property, plant and equipment and intangible assets are not depreciated or amortised once classified as held for sale.

Assets and liabilities classified as held for sale are presented separately as current items in the Consolidated Statement of Financial Position.

Discontinued operations are excluded from the results of continuing operations and are presented as a single amount as profit or loss after tax from discontinued operations in the Consolidated Statement of Income.

All other Notes to the financial statements include amounts for continuing operations, unless indicated otherwise.

Key accounting estimate and judgement

At the end of the reporting date, the Group has to assess if the value of the assets will be recovered principally through a divestment transaction rather than through continued use, and what the likelihood is that an asset will be divested within a year. This assessment is based on the facts and circumstances at that date. These facts and circumstances may change and could result in a situation where assets are divested, which were not classified as held for sale at the end of the year. When classifying non-current assets as held for sale, the Group makes estimates for their fair value (sales price and expected costs to sell). Depending on the nature of the non-current assets, the estimated fair value may be associated with uncertainty and possibly adjusted subsequently.

	2021 USD'M	2020 USD'M
Assets classified as held for sale	2,535.6	2.6
Liabilities classified as held for sale	(461.5)	–
Net assets classified as held for sale	**2,074.1**	2.6

The net assets held for sale primarily consists of the Group's equity investment in Tendril Ventures Pte. Ltd. (USD141.0 million) and assets held for sale within Puma Energy (USD1,932.9 million), mainly being the Angola operations and the Infrastructure division.

During FY2021, Trafigura decided to sell its equity investment in Tendril Ventures (Nayara), which led to reclassification to assets held for sale. Completion is expected to occur in the first half of financial year 2022.

Puma Energy and Sonangol signed an agreement in which Sonangol will acquire Puma Energy's business in Angola, which is pending approval of Sonangol's filing with antitrust authorities in Angola. Completion is expected to occur in the first quarter of financial year 2022. Reference is also made to Note 7.

Puma Energy decided to divest its Infrastructure division. Completion of this process is expected to happen in financial year 2022, which has resulted in classification as held for sale and measurement based on its fair value less cost of disposal as part of the purchase price allocation. Reference is also made to Note 7.

31. Capital and reserves

31.1 Share capital

As at 30 September 2021, the Company has 25,000,000 ordinary shares outstanding and a capital of USD1,504 million. During the financial year ended 30 September 2021, no changes took place in the outstanding share capital.

The holders of ordinary shares are entitled to receive dividends as and when declared by the Company. All ordinary shares carry one vote per share without restriction. The ordinary shares have no par value.

31.2 Capital securities

As part of the financing of the Company and its subsidiaries, the Company has three capital securities instruments with a total carrying value of USD1,173.9 million as at 30 September 2021 (30 September 2020: USD1,097.7 million). These three capital securities have a par value of USD479.2 million, EUR262.5 million and USD400.0 million respectively (30 September 2020: USD800.0 million and EUR262.5 million respectively).

These three capital securities are perpetual in respect of which there is no fixed redemption date. The distribution on the capital securities is payable semi-annually in arrears every six months from the date of issue. The Company may elect to defer (in whole but not in part except for the USD400.0 million capital security where partial interest deferral is allowed) any distribution in respect of these capital securities by providing no more than 30 or less than 5 business days' notice, unless a compulsory interest payment event has occurred, including amongst others the occurrence of a dividend payment in respect of subordinated obligations of the Company. Any interest deferred shall constitute arrears of interest and shall bear interest.

In the event of a winding-up, the rights and claims of the holders in respect of the capital securities shall rank ahead of claims in respect of the Company's shareholders, but shall be subordinated in right of payment to the claims of all present and future senior obligations, except for obligations of the Company that are expressed to rank pari passu with, or junior to, its obligations under the capital securities.

The USD479.2 million capital security is the outstanding amount of the USD800.0 million capital security initially issued as at 21 March 2017 for USD600.0 million, and re-opened as at 21 November 2017 for USD200.0 million. USD320.8 million had been repurchased and cancelled following a tender offer as at 24 September 2021. The remaining USD479.2 million capital security is listed on the Singapore Stock Exchange. The distribution on the capital security is 6.875 percent per annum until the distribution payment date in March 2022. The capital security may be redeemed at the Company's option in whole but not in part, in the period starting 90 calendar days before, and ending of, the distribution payment date in March 2022 or any distribution date thereafter upon giving not less than 30 nor more than 60 days' notice to the holders. The early redemption amount payable by the Company shall be the principal amount of the capital security, together with any interest accrued to the date fixed for redemption, all arrears of interest and all additional interest amounts.

The EUR262.5 million capital security was issued on 31 July 2019 and is listed on the Singapore Stock Exchange. The distribution on the capital security is 7.5 percent per annum until the distribution payment date in July 2024. The capital security may be redeemed at the Company's option in whole, but not in part, in the period starting 90 calendar days before, and ending of, the distribution payment date in July 2024 or any distribution date thereafter upon giving not less than 30 nor more than 60 days' notice to the holders. The early redemption amount payable by the Company shall be the principal amount of the capital security, together with any interest accrued to the date fixed for redemption, all arrears of interest and all additional interest amounts.

The USD400.0 million capital security was issued on 24 September 2021 and is listed on the Singapore Stock Exchange. The distribution on the capital security is 5.875 percent per annum until the distribution payment date in September 2027. The capital security may be redeemed at the Company's option in whole, but not in part, in the period starting 90 calendar days before, and ending of, the distribution payment date in September 2027 or any distribution date thereafter upon giving not less than 30 nor more than 60 days' notice to the holders. The early redemption amount payable by the Company shall be the principal amount of the capital security, together with any interest accrued to the date fixed for redemption, all arrears of interest and all additional interest amounts.

31.3 Currency translation reserve

The currency translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign operations, as well as from the translation of liabilities that hedge the Company's net investment in a foreign operation.

For the impact of hyperinflation accounting, see Note 44.

31.4 Revaluation reserve

The revaluation reserve comprises the fair value measurements movements of the equity investments that are accounted for at fair value through other comprehensive income. On realisation of these gains or losses, for example, on the sale of an equity instrument, the cumulative amounts of this reserve are transferred to retained earnings. Included in the revaluation reserve is a loss of USD34.9 million (30 September 2020: USD63.3 million loss) related to the mark-to-market valuation of equity investments.

31.5 Cash flow hedge reserve

The Group has elected not to apply the cost of hedging option. A change in the fair value of derivatives designated as a cash flow hedge is initially recognised as a cash flow hedge reserve in OCI. The deferred amount is then released to the Consolidated Statement of Income in the same period during which the hedged transaction affects the Consolidated Statement of Income.

Included in the cash flow hedge reserve is a loss of USD175.2 million (30 September 2020: USD79.4 million loss) related to the effective portion of the changes in fair value of cash flow hedges, net of tax. These cash flow hedges relate to hedging of interest and currency exposure on corporate loans and hedging of price exposure on future purchases and sales of commodities. The losses on hedging derivatives currently shown in the cash flow hedge reserve will be offset by decreased purchase/finance costs and increased sales values in the period the hedged transactions are recognised. Over time, the overall net impact of the hedged items and hedging instruments together to the Consolidated Statement of Income and OCI will be minimal.

The cash flow hedge reserves as at 30 September 2021 includes a negative reserve of USD56.6 million relating to the Group's share in the cash flow hedge reserves of equity-accounted investees (30 September 2020: USD57.6 million negative).

31.6 Dividends

The value of the dividends declared on the ordinary shares amounts to USD1,116.7 million (FY2020: USD585.9 million), representing USD44.7 per share (FY2020: USD23.4 per share). Dividend payments are mostly made in relation to the share redemption by the direct parent company.

G. Notes to consolidated financial statements

32. Material partly owned subsidiaries

Trafigura acquired the 50 percent non-controlling interest in DTS Holdings Pte. Ltd. from Cochan Singapore Pte. Ltd. effective 30 September 2021. DTS Holdings Pte. Ltd. is the holding company of the DT Group. The DT Group's activities span trading, shipping, infrastructure, asset management and logistics.

The consideration of this non-controlling interest (USD196.6 million) equals the equity value of the DT Group as at 30 September 2021. For the settlement of the agreed consideration it has been agreed between Trafigura and Cochan Singapore Pte. Ltd. that the receivables DTS Holdings Pte. Ltd had from Cochan Singapore Pte. Ltd will be offset against the consideration. This will be effected in the financial year ending 30 September 2022.

Trafigura continues to consolidate DT Group and the previously reported minority interest has been replaced by the payable to Cochan Singapore Pte. Ltd., which will be paid in five equal yearly payments. As at 30 September 2021, the payable amounts to USD193.1 million and is categorised under other liabilities.

The summarised financial information of subsidiaries that have material non-controlling interest is provided below:

	2021 USD'M	2020 USD'M
Revenue	4.5	16.7
Materials, transportation and storage	–	(4.3)
Employee benefits	(1.3)	(1.3)
Services and other	(2.1)	(2.4)
Operating profit or (loss) before depreciation and amortisation	**1.1**	8.7
Depreciation and amortisation (PP&E and intangible fixed assets)	(3.6)	(4.3)
Impairments (fixed assets)	(49.8)	(13.8)
Impairments (financial assets and prepayments)	–	(207.2)
Operating profit or (loss)	**(52.3)**	(216.5)
Net financing income	6.7	9.1
Profit or (loss) before tax	**(45.6)**	(207.4)
Income tax	(0.2)	–
Profit or (loss) for the year	**(45.8)**	(207.4)

During FY2021, DTS Holdings Pte. Ltd. paid a dividend of USD nil (FY2020: nil).

The summarised statement of financial position as at 30 September is as follows:

	2021* USD'M	2020 USD'M
Total non-current assets	–	156.8
Total current assets	–	355.2
Total current liabilities	–	(83.2)
Total equity	**–**	428.8
Attributable to		
Non-controlling interests	–	214.3
Owners of the Company	–	214.5

*As the non-controlling interest in DTS Holdings Pte. Ltd. was fully acquired during the year, the 2021 column has been left empty.

When acquiring control over Puma Energy Holding Pte. Ltd. (see Note 7.1) the Company also acquired the non-controlling interest in various subsidiaries that Puma Energy holds. The fair value of these non-controlling interests amounts to USD184.0 million. Together with the non-controlling interest in Puma Energy of 6.6 percent, the total non-controlling interest related to Puma Energy as at 30 September 2021 amounts to USD250.4 million. For the statement of financial position of Puma Energy, see Note 7.1.

33. Loans and borrowings

Accounting policy

Loans and borrowings are recognised initially at fair value net of directly attributable transaction costs. After initial recognition, these items are subsequently measured at amortised cost, applying the effective interest method unless the interest rate has been converted in a hedge relation from fixed into floating by means of a fair value hedge. In that case, the carrying amount is adjusted for the fair value changes caused by the hedged risk.

Borrowings are removed from the Consolidated Statement of Financial Position when the obligation specified in the contract is discharged, cancelled or expired.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the Consolidated Statement of Income.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the drawdown occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as pre-payment for liquidity services and amortised on a straight-line basis over the period of the facility to which it relates.

This note provides information about the contractual terms of the Group's interest-bearing loans and borrowings, which are measured at amortised cost. For more information about the Group's exposure to interest rate, foreign currency and liquidity risk, reference is made to Note 40.

	2021 USD'M	2020 USD'M
Non-current		
Committed unsecured syndicated loans	4,039.2	3,962.8
Private placements	894.3	650.3
Listed bonds	1,859.0	1,203.0
Securitisation programmes	419.1	91.6
Puma Energy financing*	1,521.7	–
Other loans	2,177.9	1,162.4
Total non-current	**10,911.2**	7,070.1
Current		
Committed unsecured syndicated loans	2,226.1	1,029.6
Private placements	90.8	355.3
Securitisation programmes	5,107.4	3,040.0
Puma Energy financing*	787.8	–
Other loans	647.6	201.1
Current bank borrowings	25,410.1	21,157.5
Total current	**34,269.8**	25,783.5
Total	**45,181.0**	32,853.6

* Loans and borrowings issued by Puma Energy have not been guaranteed by other Trafigura entities.

Net lease liabilities and debt reconciliation	Non-current debt USD'M	Current debt USD'M	Lease liabilities USD'M	Cash and cash equivalents USD'M	Net lease liabilities and debt USD'M
At 1 October 2020	(7,070.0)	(25,783.5)	(2,389.0)	5,757.0	**(29,485.5)**
Effect of business combination	(1,521.7)	(787.8)	(373.4)	322.0	(2,360.9)
Cashflow movements	(4,056.4)	(5,977.3)	1,044.8	4,598.5	(4,390.4)
Additions/(reductions)	–	–	(854.7)	–	(854.7)
Currency translation gains/(losses)	68.5	(38.1)	–	–	30.4
Reclassifications from long term to short term	1,683.1	(1,683.1)	–	–	–
Other movements	(14.7)	–	–	–	(14.7)
At 30 September 2021	(10,911.2)	(34,269.8)	(2,572.3)	10,677.5	**(37,075.8)**
At 1 October 2019	(8,492.1)	(22,455.5)	–	6,267.2	**(24,680.4)**
Adoption of IFRS 16	5.3	14.5	(2,764.9)	–	(2,745.1)
Cashflow movements	206.7	(2,281.7)	999.0	(510.2)	(1,586.2)
Additions/(reductions)	–	–	(623.1)	–	(623.1)
Currency translation gains/(losses)	(37.4)	(70.7)	–	–	(108.1)
Reclassifications from long term to short term	1,257.2	(1,257.2)	–	–	–
At 30 September 2020	(7,070.0)	(25,783.5)	(2,389.0)	5,757.0	**(29,485.5)**

During the financial year ended 30 September 2021, a number of important transactions for the Group were completed:

- Closure of the Company's new Asian Syndicated Revolving Credit Facility of USD1.6 billion equivalent;
- Issue of a EUR400 million bond with a five-year maturity at a price of 3.875 percent;
- Closing of its new 365-day European multi-currency syndicated revolving credit facility (ERCF) totalling USD1.85 billion as well as the extension and increase of its USD3.65 billion three-year facility. The facilities include the Company's first sustainability linked loan structure.

The Group was in compliance with all its corporate and financial covenants as at 30 September 2021.

G. Notes to consolidated financial statements

33.1 Terms and debt repayment schedule

The terms and conditions of the outstanding debt (excluding short-term bank borrowings) per 30 September 2021 are as follows:

Principal		Interest rate	Maturity	Floating/fixed rate debt	< 1 year USD'M	1-5 years USD'M	> 5 years USD'M	Total USD'M
CNH	1,020.2	Hibor + 1.00%	2021 – October	Floating	158.1	–	–	158.1
CNH	2,937.2	3.40%	2021 – October	Fixed	455.0	–	–	455.0
USD	730.0	Libor + 0.75%	2021 – October	Floating	220.0	–	–	220.0
USD	520.0	Libor + 1.10%	2021 – October	Floating	520.0	–	–	520.0
USD	875.0	Libor + 0.90%	2022 – March	Floating	873.0	–	–	873.0
USD	300.0	Libor + 1.10%	2022 – October	Floating	–	300.0	–	300.0
JPY	67,800.0	JPY Libor + 0.90%	2023 – March	Floating	–	608.4	–	608.4
USD	110.0	Libor + 0.90%	2023 – March	Floating	–	109.0	–	109.0
USD	288.0	Libor + 1.20%	2023 – October	Floating	–	288.0	–	288.0
USD	2,665.0	Libor + 0.90%	2024 – March	Floating	–	2,653.0	–	2,653.0
JPY	9,000.0	JPY Libor + 1%	2025 – March	Floating	–	80.8	–	80.8
Committed unsecured syndicated loans					**2,226.1**	**4,039.2**	**–**	**6,265.3**
CNY	540.0	5.49%	2022 – May	Fixed	83.7	–	–	83.7
USD	57.5	5.53%	2023 – March	Fixed	–	57.5	–	57.5
USD	53.0	5.55%	2023 – May	Fixed	–	53.0	–	53.0
EUR	101.5	3.50%	2024 – February	Fixed	–	117.4	–	117.4
USD	35.0	4.01%	2025 – March	Fixed	–	35.0	–	35.0
USD	67.0	5.72%	2025 – May	Fixed	–	67.0	–	67.0
EUR	8.5	4.00%	2026 – February	Fixed	–	9.8	–	9.8
USD	37.5	3.87%	2026 – April	Fixed	–	37.5	–	37.5
USD	83.0	4.17%	2027 – March	Fixed	–	–	83.0	83.0
USD	48.5	4.41%	2028 – April	Fixed	–	–	48.5	48.5
USD	20.0	5.86%	2028 – May	Fixed	–	–	20.0	20.0
USD	85.0	4.60%	2030 – March	Fixed	–	–	85.0	85.0
USD	117.5	4.89%	2031 – April	Fixed	–	–	117.5	117.5
USD	200.0	6.33%	2036 – July	Fixed	7.1	31.4	131.7	170.2
Private placements					**90.8**	**408.6**	**485.7**	**985.1**
USD	473.9	5.25%	2023 – March	Fixed	–	471.3	–	471.3
CHF	165.0	2.25%	2023 – May	Fixed	–	176.6	–	176.6
CHF	55.0	3.25%	2024 – September	Fixed	–	58.9	–	58.9
USD	500.0	5.875%	2025 – September	Fixed	–	502.0	–	502.0
EUR	450.0	3.875%	2026 – February	Fixed	–	520.7	–	520.7
USD	176.7	–	2026 – July	Fixed	–	129.7	–	129.7
Listed bonds					**–**	**1,859.0**	**–**	**1,859.0**
USD	455.0	Libor + 1.0%	2021 – November	Floating	373.7	–	–	373.7
USD	45.0	Libor + 0.5%	2021 – November	Floating	4.6	–	–	4.6
USD	300.0	Libor + 0.8%	2022 – April	Floating	300.0	–	–	300.0
USD	119.1	Libor + 4.25%	2023 – March	Floating	–	119.1	–	119.1
USD	139.5	Libor+0.530%	2024 – July	Floating	–	139.5	–	139.5
USD	139.5	1.08%	2024 – July	Fixed	–	139.5	–	139.5
USD	21.0	1.78%	2024 – July	Fixed	–	21.0	–	21.0
USD	4,484.4	Various	Various	Floating	4,429.1	–	–	4,429.1
Securitisation programmes					**5,107.4**	**419.1**	**–**	**5,526.5**
USD	190.0	Libor +1.95%	2022 – May	Floating	190.0	–	–	190.0
USD	100	5.87%	2023 – January	Fixed	–	99.4	–	99.4
EUR	200	2.65%	2024 – May	Fixed	38.7	73.1	–	111.8
USD	600	5.125%	2024 – October	Fixed	–	598.4	–	598.4
USD	750	5.00%	2026 – January	Fixed	–	750.6	–	750.6
USD	606.5	Libor+1.95%	2022 – May	Floating	201.0	–	–	201.0
USD	375	Libor+2.15%	2022 – September	Floating	187.5	–	–	187.5
USD	295	Various	Various	Various	161.0	0.2	–	161.2
Other short term loans					9.6	–	–	9.6
Puma Energy financing (not guaranteed by other Trafigura entities)					**787.8**	**1,521.7**	**–**	**2,309.5**
Other Loans					647.6	2,031.8	146.1	2,825.5
Total					**8,859.7**	**10,279.4**	**631.8**	**19,770.9**

For non-current assets pledged under loans and borrowings agreements, reference is made to Note 19.

34. Provisions

Accounting policy

The Group recognises provisions for liabilities and onerous contracts that have been incurred as of the balance sheet date and can be reliably estimated. A provision is recognised when (i) the Group has a present obligation (legal or constructive) as a result of a past event; (ii) it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and (iii) an estimate can be made of the amount of the obligation.

Claims, disputes and legal proceedings

Provisions for claims, disputes and legal proceedings are recorded if it is probable that the Group will be liable in a proceeding, for the estimated amount at which the liability can be settled. If no reliable estimate can be made, a disclosure will be made for claims, disputes or legal proceedings, for which the amount to be settled is expected to be significant.

Restoration, rehabilitation and decommissioning

Restoration, rehabilitation and decommissioning costs arising from the installation of plant and other site preparation work, discounted to their net present value, are provided for and capitalised at the time such an obligation arises. The costs are charged to the Consolidated Statement of Income over the life of the operation through depreciation of the asset and the unwinding of the discount on the provision.

Onerous contracts

A provision for onerous contracts is recognised when the expected benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract. Before a provision is established, the Group recognises any impairment loss on the assets associated with that contract.

Key accounting estimate and judgement

Provisions

The amount recognised as a provision, including tax, legal, restoration and rehabilitation, contractual and other exposures or obligations, is the best estimate of the consideration required to settle the related liability, including any related interest charges, taking into account the risks and uncertainties surrounding the obligation. The Group assesses its liabilities and contingencies based upon:

- Best information available of, for example, timing and scope of the obligation, future cost level, legal assessment and established precedents;
- Relevant tax laws; and
- Other appropriate requirements.

See Note 38 on commitments and contingencies.

Restoration, rehabilitation and decommissioning costs

A provision for future restoration, rehabilitation and decommissioning costs requires estimates and assumptions to be made around the relevant regulatory framework, the magnitude of the possible disturbance and the timing, extent and costs of the required closure and rehabilitation activities. To the extent that the actual future costs differ from these estimates, adjustments will be recorded and the Consolidated Statement of Income could be impacted. The provisions including the estimates and assumptions contained therein are reviewed regularly by management.

	Decommissioning, rehabilitation and restoration USD'M	Employee benefits USD'M	Other USD'M	**Total USD'M**
Opening balance 1 October 2020	218.5	75.7	77.3	371.5
Additions	21.7	2.6	12.8	37.1
Reversals	(9.4)	–	(0.6)	(10.0)
Additions through business combinations	7.7	8.2	28.0	43.9
Amounts charged against provisions	(7.9)	(13.0)	(9.3)	(30.2)
Unwind of discount	34.6	–	0.2	34.8
Remeasurements and other movements	12.5	(9.2)	(0.5)	2.8
Closing balance 30 September 2021	277.7	64.3	107.9	**449.9**
Non-current	266.2	58.0	86.5	410.7
Current	11.5	6.3	21.4	39.2
Closing balance 30 September 2021	277.7	64.3	107.9	**449.9**

	Decommissioning, rehabilitation and restoration USD'M	Employee benefits USD'M	Other USD'M	**Total USD'M**
Opening balance 1 October 2019	216.9	91.0	36.0	343.9
Additions	18.4	–	63.4	81.8
Reversals	(10.9)	–	(7.9)	(18.8)
Amounts charged against provisions	(8.9)	–	(17.7)	(26.6)
Unwind of discount	11.8	–	0.2	12.0
Remeasurements and other movements	(8.8)	(15.3)	3.3	(20.8)
Closing balance 30 September 2020	218.5	75.7	77.3	**371.5**
Non-current	210.4	75.7	30.3	316.4
Current	8.1	–	47.0	55.1
Closing balance 30 September 2020	218.5	75.7	77.3	**371.5**

Provisions for decommissioning, rehabilitation and restoration costs are recognised due to the environmental commitment the Group has made with local authorities and for its obligations to undertake site reclamation and remediation in connection with its mining and downstream activities.

Included in other are provisions for litigation and disputes and onerous contracts.

35. Other non-current liabilities

	2021 USD'M	2020 USD'M
Non-financial hedged items	84.9	325.8
Other	466.9	396.2
Total	**551.8**	722.0

For further information on the non-financial hedged items, see Note 41.2.

G. Notes to consolidated financial statements

36. Trade and other payables

Accounting policy

Trade and other payables represent liabilities for goods and services provided by suppliers to the Group prior to the end of the financial year that are unpaid. They are presented as current liabilities unless payment is not due within 12 months after the reporting period.

Trade and other payables are initially recognised at their fair value and subsequently measured at amortised cost using the effective interest method.

Accrued costs and expenses

Accrued cost and expenses relate to purchases and expenses made before the year end that have not been invoiced at the balance sheet date. Reasons for such delays include the need to determine final pricing, quantity and quality analysis. All are typical of the industry in which the Group operates.

Provisional pricing features

Trade and other receivables and trade and other payables related to commodity contracts, including provisional pricing features, are measured at fair value through profit or loss applying a Level 2 valuation. The related net changes in fair value are presented under material, transportation and storage.

	2020 USD'M	2019 USD'M
Trade creditors	5,131.1	2,618.9
Accrued costs and expenses	16,620.9	7,416.5
Related parties	18.4	120.6
Other creditors	919.6	606.3
Total	**22,690.0**	10,762.3

The Group's exposure to currency and liquidity risk related to trade and other payables is disclosed in Note 40.3.

Total trade and other payables related to contracts including provisional pricing features amount to USD9.1 billion (30 September 2020: USD6.2 billion).

37. Other current liabilities

	2021 USD'M	2020 USD'M
Non-financial hedged items	222.8	459.5
Deferred revenue	426.4	318.7
Other	780.9	29.4
Total	**1,430.1**	807.6

See Note 41.2 for further information on non-financial hedged items.

Deferred revenue was included in trade and other payables in the 2020 financial statements and has been reclassified.

Other includes (deferred) amounts payable resulting from the acquisition of Puma Energy. See Note 7.1.

38. Offsetting of financial assets and liabilities

Accounting policy

Financial assets and liabilities are offset and the net amount presented in the Consolidated Statement of Financial Position if, and only if, the Group has a legal right to offset the amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

In accordance with IAS 32, the Group reports financial assets and liabilities on a net basis in the Consolidated Statement of Financial Position only if there is a legally enforceable right to set off the recognised amounts and there is intention to settle on a net basis, or to realise the asset and settle the liability simultaneously. The financial assets and liabilities subject to offsetting, enforceable master netting and similar agreements as at 30 September 2021 and 2020 were as follows:

	Amounts eligible for set off under netting agreements				
2021	Gross amount USD'M	Amounts offset USD'M	Net amount USD'M	Amounts not subject to netting agreements USD'M	Net amounts presented in the statement of financial position USD'M
Related parties	250.7	(16.9)	233.8	–	233.8
Derivative assets	10,250.9	(8,498.5)	1,752.4	1,189.7	2,942.1
Related parties	(226.1)	16.9	(209.2)	–	(209.2)
Derivative liabilities	(12,651.8)	8,498.5	(4,153.3)	(974.2)	(5,127.5)

	Amounts eligible for set off under netting agreements				
2020	Gross amount USD'M	Amounts offset USD'M	Net amount USD'M	Amounts not subject to netting agreements USD'M	Net amounts presented in the statement of financial position USD'M
Related parties	921.9	(76.7)	845.2	–	845.2
Derivative assets	2,590.4	(2,111.6)	478.8	620.3	1,099.1
Related parties	(197.3)	76.7	(120.6)	–	(120.6)
Derivative liabilities	(2,382.7)	2,111.6	(271.1)	(559.8)	(830.9)

For the financial assets and liabilities subject to enforceable master netting or similar arrangements above, each agreement between the Group and the counterparty allows for net settlement of the relevant financial assets and liabilities when both elect to settle on a net basis. In the absence of such an election, financial assets and liabilities may be settled on a gross basis, however, each party to the master netting or similar agreement will have the option to settle all such amounts on a net basis in the event of default of the other party.

39. Commitments and contingencies

The Company and its subsidiaries are party to a number of legal claims and proceedings arising out of their business operations. The Company believes that the ultimate resolution of these claims and proceedings will not, in the aggregate, have a material adverse effect on the Group's financial position, income or cash flows. Such legal claims and proceedings, however, are subject to inherent uncertainties and the outcome of individual matters is unpredictable. It is possible that the Group could be required to make expenditures, in excess of established provisions, in amounts that cannot be reasonably estimated.

The total contingent liabilities related to trade finance instruments, such as letters of credit and guarantees, as at 30 September 2021 amount to USD10,477.8 million (30 September 2020: USD4,535.3 million).

The Group had outstanding commitments at the end of 30 September 2021 and 30 September 2020 as follows:

	2021 USD'M	2020 USD'M
Service arrangement contracts	1,157.0	1,325.6
Long-term lease commitments – not yet started	270.6	478.1
Short-term lease contracts	63.4	201.0
Subtotal commitments	**1,491.0**	2,004.7
Assets under construction	132.6	82.2
Total commitments	**1,623.6**	2,086.9

	2021 USD'M	2020 USD'M
Less than one year	633.4	843.8
Later than one year and less than five years	841.7	981.8
Later than five years	15.9	179.1
Commitments excluding assets under construction	**1,491.0**	2,004.7

The Group has a potential financial exposure resulting from certain oil trading and risk management activities of counterparties' representatives. These activities are the subject of on-going actions, claims and disputes against the Group. The underlying circumstances regarding these actions, claims and disputes are complex and opaque and consequently how these disputes and actions will be resolved is uncertain and the provisions taken for them are reviewed annually (and adjusted appropriately) based on the most current information and advice.

Guarantees include guarantees to trading partners in the normal course of business.

40. Financial risk management objectives and policies

The Group is exposed to a number of different financial risks arising from normal business exposures as well as its use of financial instruments. These include market risks relating to commodity prices, foreign currency exchange rates, interest rates and equity prices; credit risk; and liquidity risk.

Prudently managing these risks is an integral element of the Group's business and has been institutionalised since the Group's foundation. Risk management guidelines are established at senior management level. The various risks the Group is exposed to are managed through a combination of internal procedures, such as strict control mechanisms and policies, as well as external third parties such as the derivative, insurance and bank markets. As a rule, the Group actively manages and lays off where possible a large majority of the risks inherent to its activity. The Group's conservative risk management process is designed to:

- Provide a full and accurate awareness of risks throughout the Group;
- Professionally evaluate and monitor these risks through a range of risk metrics;
- Limit risks via a dynamic limit setting framework;
- Manage risks using a wide range of hedging instruments and strategies; and
- Ensure a constant dialogue between trading desks, risk managers and senior management.

The three main reinforcing components of the Group's risk management process are the Chief Risk Officer (CRO), the Market Risk Management Committee and the trading teams.

The CRO is independent of the revenue-producing units and reports to the Chief Operating Officer and the Management Committee. The CRO has primary responsibility for assessing and monitoring the Group's market risks. The CRO's team liaises directly with the trading teams to analyse new opportunities and ensure that risk assessments adapt to changing market conditions. The CRO's team also ensures the Group's risk management capabilities incorporate ongoing advances in technology and risk management modelling capabilities.

The Market Risk Management Committee, which comprises members of the Management Committee and the CRO, is responsible for applying the Group's risk management capabilities to improving the overall performance of the Group. In the reporting period, the Market Risk Management Committee met at least weekly to discuss and set risk and concentration limits, review changing market conditions and analyse new market risks and opportunities.

The Group's trading teams provide deep expertise in hedging and risk management in the specific markets each team operates in. While the trading teams have front line responsibility for managing the risks arising from their activities, the Group's process ensures a strong culture of escalation and accountability, with well-defined limits, automatic notifications of limit overages and regular dialogue with the CRO and Market Risk Management Committee.

G. Notes to consolidated financial statements

40.1 Market risk

Market risk is the risk of loss in the value of the Group's positions due to changes in market prices. The Group holds positions primarily to ensure the Group's ability to meet physical supply commitments to the Group's customers, to hedge exposures arising from these commitments and to support the Group's investment activities. The Group's positions change due to changing customer requirements and investment opportunities. The value of the Group's positions is accounted for at fair value and therefore fluctuates on a daily basis due to changes in market prices. Categories of market risk the Group is exposed to include:

- Commodity price risk results from exposures to changes in spot prices, forward prices and volatilities of commodities, such as crude oil, petroleum products, natural gas, base metals, coal and iron ore.
- Currency rate risk results from exposures to changes in spot prices, forward prices and volatilities of currency rates.
- Interest rate risk results from exposures to changes in the level, slope and curvature of yield curves, the volatilities of interest rates, and credit spreads.
- Equity price risk results from exposures to changes in prices and volatilities of individual equities and equity indices.

The Group hedges a large majority of price risks arising from its activities. When there is a difference in the characteristics of available hedging instruments and the corresponding commodity price exposures, the Group remains exposed to a residual price risk referred to as basis risk. Dynamically managing the basis risk that arises from the Group's activities requires specialist skills and is a core focus of the Group's trading and risk management teams.

Value at Risk

Value at Risk (VaR) is a statistical estimate of the potential loss in value of the Group's positions and unsold in-transit material due to adverse market movements. The Group calculates VaR over a one-day time horizon with a 95 percent confidence level. The Group uses an integrated VaR model that captures risks including commodity prices, interest rates, equity prices and currency rates. The Group's integrated VaR model facilitates comparison of VaR across portfolios consisting of a range of different risk exposures.

As of 30 September 2021, the Group's one-day market risk VaR was USD60.9 million (30 September 2020: USD10.3 million). Average market risk VaR (one-day day 95 percent) during the period was USD47.9 million compared to USD26.4 million in the previous financial year. The Group's Management Committee has set a target of maintaining VaR (one-day 95 percent) below 1 percent of Group equity.

The Group is aware of the inherent limitations to VaR and therefore uses a variety of risk measures and risk management techniques to create a robust risk management process. Limitations of VaR include:

- VaR does not estimate potential losses over longer time horizons where the aggregate moves may be extreme.
- VaR does not take account of the liquidity of different risk positions and therefore does not estimate the losses that might arise if the Group liquidated large positions over a short period of time.
- VaR is based on statistical analysis of historical market data. If this historical data is not reflective of futures market prices movements, VaR may not provide accurate predictions of future possible losses.

The Group's VaR calculation covers its trading businesses in the crude oil, refined oil products, petrochemical, natural gas, metals, concentrates, coal, iron ore and freight markets, and assesses the open-priced positions that are those subject to price risk, including inventories of these commodities. The Group's VaR model is based on historical simulations, with full valuation of more than 5,000 market risk factors.

VaR is calculated based on simultaneously shocking these risk factors. More recent historical price data is more heavily weighted in these simulations, which enables the VaR model to adapt to more recent market conditions and improves the accuracy of the Group's estimates of potential losses.

The Group's VaR model utilises advanced statistical techniques that incorporate the non-normal price dynamics that are an important feature of commodity markets. The Group's VaR model is continuously and automatically calibrated and back-tested to ensure that its out-of-sample performance adheres to well-defined targets. In addition, the Group's VaR model is regularly updated to ensure it reflects the current observed dynamics of the markets the Group is active in.

The Group has made a significant, ongoing investment in risk management systems, including a reporting system that automatically distributes customised risk reports throughout the Group on a daily basis. These reports provide up-to-date information on each team's risk using industry standard measures, such as 95 percent and 99 percent Value at Risk and performance indicators such as Sharpe ratios.

All trading books have well defined VaR risk limits. Management and the trading teams are automatically notified whenever a book nears its risk limit, as well as whenever a VaR limit breach occurs. In addition, the Group's deals desk management team is automatically notified whenever statistically anomalous changes occur in the profit and loss of any deal.

For senior management, the daily reports provide a comprehensive view of the Group's risk, classified according to various risk factors. These reports emphasise the risk diversification created by the Group's varied activities and highlight any excessive risk concentrations.

40.2 Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument or physical contract fails to meet its contractual obligations, and arises principally from the Group's receivables from customers and investment in debt and equity securities.

The Group has a formalised credit process with credit officers in the key locations around the world. Strict credit limits are set up for each counterparty on the basis of detailed financial and business analysis. These limits are constantly monitored and revised in light of counterparty or market developments and the amount of exposure relative to the size of the Group's Consolidated Statement of Financial Position. The Group makes extensive use of the banking and insurance markets to cover any counterparty or country risks that are in excess of its credit limits.

The risk management monitoring and decision-making functions are centralised and make extensive use of the Group's integrated bespoke IT system. The Group conducts transactions with the following major types of counterparties:

- Physical commodity counterparties spread across the vertical chains for both oil and bulk, e.g. producers, refiners/smelters and end-users. Sales to investment grade and non-investment grade counterparties are made on open terms up to internally approved credit limits. Exposures above such limits are subject to payment guarantees.
- Payment guarantee counterparties, i.e. prime financial institutions from which the Group obtains payment guarantees.
- Hedge counterparties comprising a number of prime financial institutions and physical participants in the relevant markets. There is no significant concentration of risk with any single counterparty or group of counterparties. Collateral is obtained from counterparties when the Group's exposure to them exceeds approved credit limits. It is the Group's policy to have ISDA Master Agreements or ISDA-based Long-Form Confirmation Agreements in place with all hedging counterparties.

The Group trades in all major geographic regions. Where appropriate, guarantees, insurance and letters of credit are used to reduce payment or performance risk. The Group has gross credit exposure in locations across the world with a concentration in emerging markets. Most of this exposure is transferred to third parties while the Group retains between 10 percent and 20 percent on average of the individual exposures.

The Group's maximum exposure to credit risk, without considering netting agreements or without taking into account of any collateral held or other credit enhancements, is equal to the carrying value of its financial assets as indicated in the Consolidated Statement of Financial Position plus the guarantees to third parties and associates.

The Group has amounts and guarantees outstanding related to countries that are impacted by sanctions currently imposed by the United States and European Union. The Group analysed the sanctions and exposures and concluded that these do not materially impact the Group's positions.

40.2.1 Concentration of credit risk

Concentrations of credit risk exist when changes in economic, industry or geographical factors similarly affect the Group's counterparties whose aggregate credit exposure is significant in relation to the Group's total credit exposure. The carrying amount of financial assets represents the maximum credit exposure. The Group determines concentrations of credit risk by monitoring the country profile of its third-party trade receivables on an on-going basis.

The Group has a diverse customer base, with no customer representing more than 2.5 percent of its revenues over the twelve-month period ended 30 September 2021 (FY2020: 3.5 percent).

Reference is made to Note 26 for the aging of trade and other receivables at the reporting date that were not impaired.

40.2.2 Financial assets that are not past due

Trade and other receivables that are not past due are creditworthy debtors with good payment records with the Group. Cash and cash equivalents and derivatives that are not past due are placed with or entered into with reputable financial institutions or companies with high credit ratings and no history of default. The credit quality of trade and other receivables is assessed based on a strict credit policy. The Group has monitored customer credit risk, by grouping trade and other receivables based on their characteristics.

Based on the Group's monitoring of customer credit risk, the Group believes that, except as indicated above, no material expected credit loss allowance is necessary in respect of trade receivables not past due.

40.2.3 Impairment of financial assets

Information regarding impairment of financial assets is disclosed in Note 14 (Impairment) and Note 26 (Trade and other receivables).

40.2.4 Guarantees

The Group's policy is to provide financial guarantees only to wholly owned subsidiaries and trading partners in the normal course of business. As part of the Group's ordinary physical commodity trading activities, Trafigura Group Pte. Ltd. may act as guarantor by way of issuing guarantees accepting responsibility for subsidiaries' contractual obligations.

40.3 Liquidity risk

Liquidity risk is the risk that the Group is unable to meet its payment obligations when due, or that it is unable, on an on-going basis, to borrow funds in the market on an unsecured or secured basis at an acceptable price to fund actual or proposed commitments.

The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient cash and cash equivalents and ready sources of committed funding available to meet anticipated and unanticipated funding needs. Sound financial management with a focus on liquidity has been instrumental to the Group's success. The Group has demonstrated the ability to raise the appropriate types of financing to match the needs of the business and to tap various investor bases (e.g. syndicated loan markets, trade finance markets, bond markets, private placement markets and securisation), maturities and geographies.

The Group manages its treasury and liquidity risks maintaining a strong liquidity position through the following:

- Targeting immediately available cash on hand of minimum USD500 million under normal conditions (higher in the case of extreme volatility);
- Maintaining transactional lines which allow the Group to mark-to-market financings to the value of the underlying physical assets. Mark-to-market financing is performed weekly (or intra-weekly in the case of extreme volatility) and provides an additional source of liquidity that is not available to competitors, which are financed purely from revolving credit facilities and/or capital markets securities;
- Committed unsecured credit facilities;
- Maintaining headroom under transactional trade finance lines and committed revolving credit facilities; and
- Reasonable distribution of profit (in order to generate retained earnings) and subordination of repurchased equity.

G. Notes to consolidated financial statements

The maturity analysis of the Group's financial liabilities based on the contractual terms is as follows:

	0-1 years USD'M	1-5 years USD'M	> 5 years USD'M	**Total USD'M**
30 September 2021				
Financial liabilities				
Current and non-current loans and borrowings	34,269.8	10,279.4	631.8	45,181.0
Trade and other payables	22,690.0	–	–	22,690.0
Expected interest payments on committed lines until maturity	318.3	614.7	154.2	1,087.2
Derivative financial liabilities	4,323.2	764.7	39.5	5,127.4
Total financial liabilities	61,601.3	11,658.8	825.5	**74,085.6**

	0-1 years USD'M	1-5 years USD'M	> 5 years USD'M	**Total USD'M**
30 September 2020				
Financial liabilities				
Current and non-current loans and borrowings	25,783.5	6,556.5	513.6	32,853.6
Trade and other payables	10,762.3	–	–	10,762.3
Expected interest payments on committed lines until maturity	366.1	538.4	152.0	1,056.5
Derivative financial liabilities	640.1	162.6	28.2	830.9
Total financial liabilities	37,552.0	7,257.5	693.8	**45,503.3**

40.4 Interest rate risk

The Group is not exposed to significant interest rate risk since the maturity of its short-term funding ranges from a few weeks to a few months and each commercial transaction considers current interest rate levels. Interest rate risk of the Group is mainly applicable on the long-term funding of the Group, although a majority of debt, whether long term or short term, is at floating rate.

From time to time, the Group enters into interest rate derivative transactions to lock-in current interest rate levels, for instance, interest rate swaps that provide a method of reducing the Group's exposure to floating interest rates arising from its corporate funding programmes. To realise the desired matching of derivative results with the hedged interest rate payments, cash flow hedge accounting is applied and the derivatives are designated as hedging instruments. The derivatives are carried on balance and their effectiveness is tested on a quarterly basis.

40.5 Currency risk

The Group has few exposures to foreign currency risk on its trading activities and those that do exist are hedged out. The Group does not use financial instruments to hedge the translation risk related to equity and earnings of foreign subsidiaries and non-consolidated companies.

The Group uses cross-currency swaps to hedge currency risk on the principal and related payments of foreign currency denominated loans and bonds for which cash flow hedge accounting is applied. The hedge relationship is expected to be highly effective due to the matching of critical terms between the underlying hedged item and the associated hedge instrument.

The periods when the cash flows are expected to occur are similar to the periods when the cash flows on the foreign currency denominated loans and bonds occur as indicated in Notes 31 and 40.3. Ineffectiveness may arise (i) if the underlying interest reference rate is divergent to the underlying reference rate in the Group's debt agreements; (ii) to the extent that the hedging instrument is already in the money or out of the money at the point of designation (compared to the hypothetical derivative that must be created on market); (iii) when the timing of the hedging instrument goes beyond the hedged item and it is not considered highly probable that the hedged item will be refinanced beyond its current maturity date; or (iv) if the hedging instrument is for an amount greater than the hedged item.

40.6 Capital management

The Group's policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business.

The Company's immediate parent, Trafigura Beheer B.V., is exclusively owned by its employees. This shareholding arrangement leads to an alignment of the long-term interests of the Group and its management team. By virtue of having its own capital at risk, senior management is incentivised to take a long-term view of the Group's overall performance and to protect its capital.

The Group's capital management aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the lenders to immediately call loans and borrowings. There have been no breaches in the financial covenants of any loans and borrowing in the current period.

The Group monitors its capital adequacy using an adjusted debt-to-equity ratio, which is adjusted total debt divided by the Group's equity. For this purpose, the adjusted debt metric represents the Group's total non-current and current debt less cash, deposits, readily marketable inventories (including purchased and pre-paid inventories that are being released), debt related to the Group's receivables securitisation programme and the non-recourse portion of loans from third parties.

The Company's long-term average target adjusted debt-to-equity ratio is 1.0x. The Company's adjusted net debt-to-equity ratio at the end of the reporting period was as follows:

	2021 USD'M	2020 USD'M
Non-current loans and borrowings	10,911.2	7,070.1
Current loans and borrowings	34,269.8	25,783.5
Total debt	**45,181.0**	32,853.6
Adjustments		
Cash and cash equivalents	10,677.5	5,757.0
Deposits	460.0	466.0
Inventories (including purchased and pre-paid inventories)	30,508.8	20,921.8
Receivables securitisation debt	5,150.6	2,750.6
Non-recourse debt	555.4	198.4
Adjusted total debt	**(2,171.3)**	2,759.8
Group equity	**10,559.9**	7,789.9
Adjusted debt to Group equity ratio at the end of the year	**(0.21)**	0.35

41. Hedging activities and derivatives

The Group utilises derivative financial instruments (shown separately in the Consolidated Statement of Financial Position) to hedge its primary market risk exposures, primarily risks related to commodity price movements, and to a lesser extent, exposure to foreign currency exchange rates and interest rate movements. Commodity derivative contracts may be utilised to hedge against commodity price risk for fixed priced physical purchase and sales contracts, including inventory. Commodity swaps, options and futures are used to manage price and timing risks in conformity with the Group's risk management policies.

Accounting policy

Derivative financial instruments

Derivative instruments, such as physical contracts to sell or purchase commodities that do not meet the own use exemption, are initially recognised at fair value when the Group becomes a party to the contractual provisions of the instrument, and are subsequently remeasured at fair value at the end of each reporting period. Any attributable transaction costs are recognised in the Consolidated Statement of Income as incurred. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

Gains and losses on derivative instruments for which hedge accounting is not applied are recognised in materials, transportation and storage costs.

Hedge accounting

Generally, the Group does not apply hedge accounting, but in some instances, it may elect to apply hedge accounting. Those derivatives qualifying and designated as hedges are either:

(i) A **cash flow hedge** of the change in cash flows to be received or paid relating to a recognised asset or liability or a highly probable transaction, or

(ii) A **fair value hedge** of the change in fair value of a recognised asset or liability or an unrecognised firm commitment.

At the inception of a hedge relationship, the Group formally designates and documents the hedge relationship to which it wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge.

The documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Group will assess whether the hedging relationship meets the hedge effectiveness requirements (including the analysis of sources of hedge ineffectiveness and how the hedge ratio is determined). A hedging relationship qualifies for hedge accounting if it meets all of the following effectiveness requirements:

- There is 'an economic relationship' between the hedged item and the hedging instrument.
- The effect of credit risk does not 'dominate the value changes' that result from that economic relationship.
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

If the hedge ratio for risk management purposes is no longer optimal but the risk management objective remains unchanged and the hedge continues to qualify for hedge accounting, the hedge relationship will be re-calibrated by adjusting either the volume of the hedging instrument or the volume of the hedged item so that the hedge ratio aligns with the ratio used for risk management purposes. Any hedge ineffectiveness is calculated and accounted for at the time of the hedge relationship re-calibration.

When a hedging instrument expires, or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative deferred gain or loss and deferred costs of hedging in equity are reclassified to the Consolidated Statement of Income when the underlying hedged item is realised in the Consolidated Statement of Income.

Cash flow hedge

The effective portion of the gain or loss on the hedging instrument is recognised in OCI in the cash flow hedge reserve, while any ineffective portion is recognised immediately in the Consolidated Statement of Income. The cash flow hedge reserve is adjusted to the lower of the cumulative gain or loss on the hedging instrument and the cumulative change in fair value of the hedged item.

The Group uses forward currency contracts as hedges of its exposure to foreign currency risk in forecast transactions and firm commitments, as well as forward commodity contracts for its exposure to volatility in the commodity prices. The ineffective portion relating to foreign currency contracts is recognised as 'services and other' and the ineffective portion relating to commodity contracts is recognised in materials, transportation and storage costs.

The amounts accumulated in OCI are accounted for, depending on the nature of the underlying hedged transaction. If the hedged transaction subsequently results in the recognition of a non-financial item, the amount accumulated in equity is removed from the separate component of equity and included in the initial cost or other carrying amount of the hedged asset or liability. This is not a reclassification adjustment and will not be recognised in OCI for the period. This also applies where the hedged forecast transaction of a non-financial asset or non-financial liability subsequently becomes a firm commitment for which fair value hedge accounting is applied.

For any other cash flow hedges, the amount accumulated in OCI is reclassified to profit or loss as a reclassification adjustment in the same period or periods during which the hedged cash flows affect profit or loss.

If cash flow hedge accounting is discontinued, the amount that has been accumulated in OCI must remain in accumulated OCI if the hedged future cash flows are still expected to occur. Otherwise, the amount will be immediately reclassified to profit or loss as a reclassification adjustment. After discontinuation, once the hedged cash flow occurs, any amount remaining in accumulated OCI must be accounted for depending on the nature of the underlying transaction as described above.

Fair value hedge

The Group elects to apply fair value hedge accounting to hedge certain risk components of non-financial hedged items. When applicable, the Group designates derivative hedging instruments as fair value hedges in relationship to the hedged item. The hedged item may be individual risk components, which are separately identifiable and reliably measurable.

The hedged item is accounted for at fair value through profit and loss, and reflected in the Consolidated Statement of Financial Position as either a recognised asset or liability or an unrecognised firm commitment. Each identified risk component of the hedged item will be revalued at each period with its corresponding benchmark accounted for at fair value and recognised through profit and loss. Further, it is reflected on the Consolidated Statement of Financial Position as either a recognised asset or liability or an unrecognised firm commitment.

A change in the fair value of derivatives designated as a fair value hedge is reflected together with the change in the fair value of the hedged item in the Consolidated Statement of Income.

If the hedged item is derecognised, the unamortised fair value is recognised immediately in profit or loss.

G. Notes to consolidated financial statements

Accounting policy

Current versus non-current classification

Derivative instruments that are not designated as effective hedging instruments are classified as current or non-current, or separated into current and non-current portions based on an assessment of the facts and circumstances (i.e. the underlying contractual cash flows). Where the Group will hold a derivative as an economic hedge (and does not apply hedge accounting) for a period beyond 12 months after the reporting date, the derivative is classified as non-current (or separated into current and non-current portions).

Key accounting estimate and judgement

Valuation of financial assets, including derivative and Level 3 instruments

Derivative instruments are carried at fair value and the Group evaluates the quality and reliability of the assumptions and data used to measure fair value in the three hierarchy levels, Level 1, 2 and 3, as prescribed by IFRS 13. Fair values are determined in the following ways: externally verified via comparison to quoted market prices in active markets (Level 1); by using models with externally verifiable inputs (Level 2); or by using alternative procedures such as comparison to comparable instruments and/or using models with unobservable market inputs requiring the Group to make market-based assumptions (Level 3). Reference is made to Note 42, which includes an overview of the fair value hierarchy and applied valuation methods.

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between Levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

	2021 USD'M	2020 USD'M
Physical forwards	1,846.5	421.2
OTC derivatives	543.6	203.3
Futures	95.1	–
Interest rate swaps	25.9	21.2
Cross-currency swaps	10.2	7.3
Other financial derivatives	420.8	446.1
Derivative assets	**2,942.1**	1,099.1
Non-current	331.8	232.7
Current	2,610.3	866.4
Derivative assets	**2,942.1**	1,099.1

	2021 USD'M	2020 USD'M
Physical forwards	3,291.1	314.2
OTC derivatives	1,535.7	243.7
Cross-currency swaps	51.3	8.6
Interest rate swaps	20.6	36.3
Futures	10.7	61.3
Other financial derivatives	218.1	166.8
Derivative liabilities	**5,127.5**	830.9
Non-current	804.3	190.8
Current	4,323.2	640.1
Derivative liabilities	**5,127.5**	830.9

41.1 Cash flow hedge accounting

In some instances, the Group has elected to apply cash flow hedge accounting to certain highly probable cash flows. These cash flows relate to the following hedged items:

- Forecasted purchases and sales of LNG;
- Sales of mining production;
- Purchases of electricity which is needed for the refinery process; and
- Operating expenditure, interest payments and other forecasted purchases and sales.

The designated hedge derivatives are accounted for at fair value, with the fair value movements being deferred through other comprehensive income where they are deemed to be entered in an effective hedge relationship with cash flows that are yet to be reflected in the Consolidated Statement of Income. Any fair value movements that are not considered to be an effective hedge are recognised directly through the Consolidated Statement of Income.

Ineffectiveness will occur due to time spread between the hedged item and the hedging instrument as well as due to the basis risk. The effectiveness of the economic relationship between the hedging instruments and the hedged item has been assessed at the inception of the hedge accounting designation and is reassessed at least on an annual basis. The hedge ratio is determined by the ratio that provides a strong relationship between movements in the fair value of the hedged item and hedging instruments at the inception of the hedge accounting relationship.

The overview of the cash flow hedges is as follows:

	Maturity	Equivalent	2021 Notionals	2020 Notionals	2021 USD'M Fair values	2020 USD'M Fair values
Cross-currency/interest swaps hedging interest payments	0-4 years	USD'M	2,880.1	2,094.7	(48.0)	(20.9)
Gas and fx futures/swaps hedging future purchases and sales of LNG	0-4 years	various	160.0	604.3	(13.7)	(51.5)
Fx swaps hedging future non-USD loan transaction and opex payments	0-2 years	USD'M	2,348.6	2,089.1	21.4	77.2
LME futures hedging future sales and mining production	0-2 years	DMT	137,407.3	261,661.4	(13.1)	(8.0)
Commodity swaps hedging future sales of metals	0-2 years	DMT	4,476.0	–	(24.9)	–
Electricity swaps hedging future purchase of electricity	0-10 years	AUD'M	531.6	592.1	(124.9)	(70.6)
Oil-related instruments hedging future purchases, sales and cost	< 1 year	USD'M	–	25.5	–	1.0
Total					**(203.3)**	(72.8)

	Ineffectiveness recognised through statement of income 2021 USD'M	Ineffectiveness recognised through statement of income 2020 USD'M	Gain/(loss) on cash flow hedges through other comprehensive income 2021 USD'M	Gain/(loss) on cash flow hedges through other comprehensive income 2020 USD'M
Cross-currency/interest swaps hedging interest payments	(0.2)	3.5	30.8	(33.3)
Gas and fx futures/swaps hedging future purchases and sales of LNG	(0.3)	0.3	29.2	35.1
Fx swaps hedging future non-USD loan transaction and opex payments	(6.1)	14.2	(61.7)	78.0
LME futures hedging future sales and mining production	(0.1)	1.7	(45.1)	18.8
Electricity swaps hedging future purchase of electricity	–	(0.1)	(32.4)	(52.7)
Oil-related instruments hedging future purchases, sales and cost	–	0.1	(1.0)	1.0
Commodity swaps hedging future sales of metals	–	–	(24.9)	–
Total	**(6.7)**	19.7	**(105.1)**	46.7
Cash flow hedge reserve on equity-accounted investees			0.7	(43.9)
Tax on cash flow hedge reserve			8.7	18.3
Cash flow hedge reserve movement in statement of changes in equity			**(95.7)**	21.1

Other comprehensive movements in the Consolidated Statement of Changes in Equity include USD0.7 million positive movement of cash flow hedge reserves from equity-accounted investees (FY2020: USD43.9 million negative).

41.2 Fair value hedge accounting

In some instances, the Group elects to apply fair value hedge accounting to certain physical forward contracts described in the table below (the hedged items) and the corresponding paper hedge positions (the hedging instruments). Under the strict rules of hedge accounting, the Group is required to match each paper hedge position with the corresponding physical contract position. The intention is that a movement in fair value of a physical contract is accounted against the corresponding (and opposite) movement in fair value of the related paper hedges: both movements (increase and decrease) are recorded in the Consolidated Statement of Income (specifically to the line materials, transportation and storage), leading to a neutral result. It is important to note that the fair value of the physical contracts does not include any trading margin, premium or any form of potential profit of the physical contracts.

The Group has elected to apply fair value hedge accounting to non-financial hedged items or certain risk components of non-financial hedged items. These non-financial hedged items relate to firm commitments with respect to tolling agreements, a transportation agreement and offtake agreements amongst others described below.

	Tolling agreements	Transportation agreements	Offtake agreements
Nature of forward contract (=hedged item)	Convert crude to refined products	Transport crude from Permian Basin to Gulf Coast	Offtake LNG in the US, Middle East and Asia
Main counterparty of forward contract	Buckeye Texas Processing LLC and Magellan Processing LP	Cactus II Pipeline LLC	Cheniere Marketing LLC and Freeport LNG Marketing LLC AbuDhabi Gas Liquifaction Company LTD Pavilion Energy Trading & Supply PTE LTD Naturgy LNG Singapore PTE LTD
Maturity of forward contract	Ranging from FY2021 to FY2023	Ranging from FY2021 to FY2024	Ranging from FY2021 to FY2033
Trading strategy	Process crude into refined products	Transport crude from Permian Basin to Gulf Coast	Purchase LNG, transport, transform back into natural gas, and sell natural gas in Europe/Asia
Nature of paper hedge (=hedging instrument)	Hedging spread exposure (crude vs refined products) with futures and swaps	Hedging spread exposure (Permian Basin crude vs Gulf Coast crude) with futures and swaps	1) Hedging spread exposure (LNG in the US vs natural gas in Europe/Asia) with futures and swaps 2) Hedging Gas Slope with futures and swaps

G. Notes to consolidated financial statements

41.2.1 Hedged items

The Group's tolling agreements represent non-financial hedged items, which the Group has entered into for fractionation services to convert crude feedstock into various crude refined products. The derivative hedging instruments (hedges consisting of futures and swaps) are entered into to hedge the spread exposures, referred to as the hedged risk, between the purchase of crude feedstock and the sale of crude refined products.

The Group's transportation agreement represents a non-financial hedged item, which the Group has entered into for the transportation of crude oil from the Permian Basin of Texas to the Gulf Coast. The derivative hedging instruments (hedges consisting of futures and swaps) are entered into to hedge the spread exposures, referred to as the hedged risk, between the purchase of inland crude oil barrels and the sale of those barrels on the Gulf Coast.

The Group's offtake agreements represent a non-financial hedged item, which the Group has entered into for the purchase of liquefied natural gas (LNG) from the US with a number of counterparties. The derivative hedging instruments (hedges consisting of futures and swaps) are entered into to hedge the spread exposures, referred to as the hedged risk, between purchasing LNG from the US and selling LNG to its expected destination markets. Additionally, some Asian and Middle East LNG supply contracts that also represent a non-financial hedged item are also covered in the scope of hedge accounting. The LNG price in these contracts is indexed to Brent against a coefficient, referred to as Gas Slope. The derivative hedging instruments (hedges consisting of futures and swaps) are entered into to hedge the Gas Slope, referred to as the hedged risk.

The Group's storage and bareboat charter agreements represent non-financial hedged items, which the Group has entered into for the purpose of storing and transporting oil. The derivative hedging instruments are entered to hedge the time spread and freight exposure on the different contracts.

41.2.2 Hedging instruments

When applicable, the Group designates derivative hedging instruments as fair value hedges in relationship to the associated hedged items:

- The maturity profile of the hedging instrument used for hedging the designated risk components associated with the tolling agreements varies from one month to four years.
- The maturity profile of the hedging instruments used for hedging the designated risk components associated with the transportation agreement varies from one month to five years.
- The maturity profile of the hedging instruments used for the hedging of the offtake agreement varies from one month to five years.
- The maturity profile of the hedging instruments used for hedging the storage and bareboat charter agreements varies from one month to three years.

The designated hedge derivatives are accounted for at fair value through profit and loss. The identified hedged items are accounted for at fair value and recognised in materials, transport and storage within the Consolidated Statement of Income and the fair value is reflected in the Consolidated Statement of Financial Position as either a recognised asset or liability. The fair value is determined using benchmarks best representing the designated hedged item. Specifically, in the case of LNG, the fair value of the hedged item also considers unobservable inputs.

41.2.3 Economic relationship

IFRS 9 requires the existence of an economic relationship between the hedged item and the hedging instrument. At designation and at the start of each reporting period, critical terms of both hedged items and hedge instruments in a hedge relationship are reviewed to ascertain the expectation that the value of the hedging instrument and the value of the hedged item would move into opposite directions as a result of the common underlying and therefore meeting the risk management objective of the hedge relationship.

41.2.4 Hedge effectiveness assessment

At each reporting date or on significant changes in circumstances a quantitative hedge effectiveness assessment is performed. The fair values of both hedged items and hedging instruments are measured and the net difference of the changes is the hedge ineffectiveness amount. The hedge ineffectiveness amount is analysed by its various sources (for example: basis differences, location differences, timing differences, quantity or notional amount differences, currency basis and forward points, credit risk or other risks) where applicable. Specific factors that may impact ineffectiveness are a mismatch in the designated hedge period and the maturity period of the hedging instrument and a differential of the various benchmarks for the pricing of the hedging instruments and the hedged items. In the case of LNG, the hedged item designated includes foreign currency exposure, however, the foreign currency hedges have not been designated into the hedge relationship, giving rise to additional ineffectiveness. The fair value of the foreign exchange hedges that have not been designated can be seen in the table below. The ineffectiveness amounted to a gain of USD62.4 million (FY2020: USD75.9 million).

The fair value adjustment on the non-financial hedged items is presented in the Consolidated Statement of Financial Position under the following categories:

	30 September 2021		30 September 2020	
	USD'M	USD'M	USD'M	USD'M
	Other non-current assets (Note 24)	Other current assets (Note 28)	Other non-current assets (Note 24)	Other current assets (Note 28)
Non-financial hedged items – Tolling agreements	21.5	69.1	76.9	61.8
Non-financial hedged items – Transportation agreement	–	–	–	–
Non-financial hedged items – LNG contracts	579.3	2,085.6	–	0.7
Non-financial hedged items – Bareboat charter agreements	4.8	–	–	2.0
Non-financial hedged items – Storage agreements	–	–	–	–
Closing balance of the hedged item	**605.6**	**2,154.7**	76.9	64.5

	30 September 2021		30 September 2020	
	USD'M	USD'M	USD'M	USD'M
	Other non-current liabilities (Note 35)	Other current liabilities (Note 37)	Other non-current liabilities (Note 35)	Other current liabilities (Note 37)
Non-financial hedged items – Tolling agreements	–	–	–	–
Non-financial hedged items – Transportation agreement	83.4	198.8	163.2	270.3
Non-financial hedged items – LNG contracts	–	–	159.1	151.4
Non-financial hedged items – Bareboat charter agreements	0.1	15.2	1.0	28.7
Non-financial hedged items – Storage agreements	1.4	8.8	2.5	9.1
Closing balance of the hedged item	**84.9**	**222.8**	325.8	459.5
Net balance of the hedged item (+ = asset/ - = liability)	**2,452.6**		(643.8)	

The following table summarises the movements in the non-financial hedged items and the related derivatives recognised in the Consolidated Statement of Income:

Fair value hedge accounting	30 September 2021 USD'M	30 September 2020 USD'M
Opening balances of the derivatives marked as hedges	**471.1**	(170.0)
Fair value movement included in the hedge relationship	(2,684.0)	760.7
Hedges for which hedge relationship matured	(139.9)	(27.1)
Hedges not designated in hedge relationship	(44.2)	(92.5)
Closing balance of the derivatives marked as hedges	**(2,397.0)**	471.1
Opening balance of the hedged item	**(643.8)**	100.9
Fair value movement included in the hedge relationship	2,746.4	(684.8)
Release of fair value adjustment due to matured hedge relationship	350.0	(59.9)
Closing balance of the hedged item	**2,452.6**	(643.8)
Lifetime to date net gain/(loss)	55.6	(172.7)
Year to date net gain/(loss)	228.3	(103.7)

42. Fair value

Accounting policy

The Group measures financial instruments, such as derivatives, and certain non-derivative financial assets at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities.

Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable.

Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between Levels in the hierarchy by reassessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

G. Notes to consolidated financial statements

42.1 Fair values versus carrying amounts

The fair values of inventories, financial assets and liabilities, together with the carrying amounts shown in the Consolidated Statement of Financial Position, are as follows:

30 September 2021	Carrying value USD'M	Fair value USD'M
Assets		
Listed equity securities – Fair value through OCI	2.7	2.7
Listed equity securities – Fair value through profit or loss	68.7	68.7
Listed debt securities – Fair value through profit or loss	277.3	277.3
Unlisted equity investments – Fair value through profit or loss	133.5	133.5
Unlisted equity investments – Fair value through OCI	242.4	242.4
Other investments – Fair value through profit or loss	862.2	862.2
Loans receivable (*)	362.4	362.4
Inventories	29,653.5	29,653.5
Trade and other receivables (*)	24,748.1	24,748.1
Non-financial hedged items	2,760.3	2,760.3
Derivatives	2,942.1	2,942.1
Deposits (*)	460.0	460.0
Cash and cash equivalents (*)	10,677.5	10,677.5
Total financial assets and inventories	**73,190.7**	**73,190.7**
Liabilities		
Loans and borrowings		
Floating rate borrowings (*)	40,161.2	40,161.2
Fixed rate borrowings	5,019.8	5,128.2
Trade and other payables (*)	22,690.0	22,690.0
Non-financial hedged items	307.7	307.7
Derivatives	5,127.5	5,127.5
Total financial liabilities	**73,306.2**	**73,414.6**

30 September 2020	Carrying value USD'M	Fair value USD'M
Assets		
Listed equity securities – Fair value through OCI	3.9	3.9
Listed equity securities – Fair value through profit or loss	25.3	25.3
Listed debt securities – Fair value through profit or loss	220.9	220.9
Unlisted equity investments – Fair value through profit or loss	34.3	34.3
Unlisted equity investments – Fair value through OCI	232.7	232.7
Other investments – Fair value through profit or loss	–	–
Loans receivable (*)	694.4	730.0
Inventories	20,177.6	20,177.6
Trade and other receivables (*)	15,245.1	15,251.2
Non-financial hedged items	141.4	141.4
Derivatives	1,099.1	1,099.1
Deposits (*)	466.0	466.0
Cash and cash equivalents (*)	5,757.0	5,757.0
Total financial assets and inventories	**44,097.7**	**44,139.4**
Liabilities		
Loans and borrowings		
Floating rate borrowings (*)	30,330.0	30,330.0
Fixed rate borrowings	2,523.6	2,585.1
Trade and other payables (*)	11,081.0	11,081.0
Non-financial hedged items	785.2	785.2
Derivatives	830.9	830.9
Total financial liabilities	**45,550.7**	**45,612.2**

* Management has determined that these carrying amounts reasonably approximate their fair values because these are mostly short term in nature and are re-priced regularly.

Increases in fair value of derivatives are predominantly caused by physical forward contracts. The gains booked on these contracts are offset by similar losses on associated cash settled hedge derivatives, meaning no net profit has been taken on these forward physical contracts.

42.2 Fair value hierarchy

The table below analyses financial instruments and other assets and liabilities carried at fair value by valuation method. The different levels have been defined as follows:

- **Level 1:** quoted prices (unadjusted) in active markets for identical assets or liabilities.
- **Level 2:** inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- **Level 3:** inputs for the asset or liability that are not based on observable market data (unobservable inputs).

Regarding financial instruments: Level 1 classifications primarily include futures with a maturity of less than one year. Level 2 classifications primarily include swaps and physical forward transactions that derive their fair value primarily from exchange quotes and readily observable broker quotes. Level 3 classifications primarily include physical forward transactions that derive their fair value predominately from calculations that use broker quotes and applicable market-based estimates surrounding location, quality and credit differentials. In circumstances where Trafigura cannot verify fair value with observable market inputs (Level 3 fair values), it is possible that a different valuation model could produce a materially different estimate of fair value.

It is Trafigura's policy to hedge significant market risk, therefore sensitivity to fair value movements is limited. Trafigura manages its market risk using the Value at Risk (VaR) as disclosed in Note 40.1.

Other financial assets and inventories	Level 1 USD'M	Level 2 USD'M	Level 3 USD'M	Total USD'M
30 September 2021				
Listed equity securities – Fair value through OCI	2.7	–	–	2.7
Listed equity securities – Fair value through profit or loss	68.7	–	–	68.7
Listed debt securities – Fair value through profit or loss	30.5	–	246.8	277.3
Unlisted equity investments – Fair value through profit or loss	–	–	133.5	133.5
Unlisted equity investments – Fair value through OCI	–	–	242.4	242.4
Other investments – Fair value through profit or loss	–	–	862.2	862.2
Futures	95.1	–	–	95.1
OTC derivatives	–	543.6	–	543.6
Physical forwards	274.6	656.5	915.4	1,846.5
Cross-currency swaps	–	10.2	–	10.2
Interest rate swaps	–	25.9	–	25.9
Non-financial hedged items	–	679.0	2,081.3	2,760.3
Other financial derivatives	–	420.7	–	420.7
Inventories	–	29,653.5	–	29,653.5
Total	471.6	31,989.5	4,481.6	**36,942.6**

Other financial assets and inventories	Level 1 USD'M	Level 2 USD'M	Level 3 USD'M	Total USD'M
30 September 2020				
Listed equity securities – Fair value through OCI	3.9	–	–	3.9
Listed equity securities – Fair value through profit or loss	25.3	–	–	25.3
Listed debt securities – Fair value through profit or loss	–	–	220.9	220.9
Unlisted equity investments – Fair value through profit or loss	–	–	34.3	34.3
Unlisted equity investments – Fair value through OCI	–	–	232.7	232.7
Other investments – Fair value through profit or loss	–	–	–	–
Futures	–	–	–	–
OTC derivatives	–	202.3	1.0	203.3
Physical forwards	–	6.5	414.7	421.2
Cross-currency swaps	–	7.3	–	7.3
Interest rate swaps	–	21.2	–	21.2
Non-financial hedged items	–	140.7	0.7	141.4
Other financial derivatives	–	446.0	–	446.0
Inventories	–	20,177.6	–	20,177.6
Total	29.2	21,001.6	904.3	**21,935.1**

Other financial liabilities	Level 1 USD'M	Level 2 USD'M	Level 3 USD'M	Total USD'M
30 September 2021				
Futures	10.7	–	–	10.7
OTC derivatives	–	1,410.8	124.9	1,535.7
Physical forwards	1,330.5	1,277.0	683.6	3,291.1
Cross-currency swaps	–	51.3	–	51.3
Interest rate swaps	–	20.6	–	20.6
Non-financial hedged items	–	307.7	–	307.7
Other financial derivatives	–	218.0	–	218.0
Fixed rate borrowings	–	5,019.8	–	5,019.8
Total	1,341.2	8,305.2	808.5	**10,454.8**
Net other financial assets/(liabilities)	(869.6)	23,684.2	3,673.1	**26,487.8**

Other financial liabilities	Level 1 USD'M	Level 2 USD'M	Level 3 USD'M	Total USD'M
30 September 2020				
Futures	61.3	–	–	61.3
OTC derivatives	–	144.4	99.3	243.7
Physical forwards	–	4.6	309.6	314.2
Cross-currency swaps	–	8.6	–	8.6
Interest rate swaps	–	36.3	–	36.3
Non-financial hedged items	–	474.7	310.4	785.1
Other financial derivatives	–	166.8	–	166.8
Fixed rate borrowings	–	2,523.6	–	2,523.6
Total	61.3	3,359.0	719.3	**4,139.6**
Net other financial assets/(liabilities)	(32.1)	17,642.6	185.0	**17,795.5**

G. Notes to consolidated financial statements

The movements in the Level 3 hierarchy can be summarised as follows:

USD'M	Physical forwards/ Derivatives	Equity/ Debt securities	Firm commitments	Other investments	Total
1 October 2020	6.9	487.9	(309.8)	–	**185.0**
Invested	–	91.9	–	1,841.3	1,933.2
Total gain/(loss) recognised in statement of income	218.3	57.0	2,611.6	327.3	3,214.2
Total gain/(loss) recognised in OCI	(37.7)	(14.2)	–	–	(51.9)
Total realised	(80.6)	–	(220.5)	(1,306.3)	(1,607.4)
30 September 2021	106.9	622.6	2,081.3	862.3	**3,673.1**

USD'M	Physical forwards/ Derivatives	Equity/ Debt securities	Firm commitments	Other investments	Total
1 October 2019	49.7	632.8	19.2	–	**701.7**
Total gain/(loss) recognised in statement of income	(3.5)	(133.3)	(469.9)	–	(606.7)
Total gain/(loss) recognised in OCI	(63.8)	(31.9)	–	–	(95.8)
Invested	–	31.2	–	–	31.2
Disposals	–	(10.9)	–	–	(10.9)
Total realised	24.5	–	140.9	–	165.4
30 September 2020	6.9	487.9	(309.8)	–	**185.0**

There have been no transfers between fair value hierarchy levels in the reporting period ended 30 September 2021. Materially all Level 3 physical forwards are settled in the next year. See Note 23.3 for equity/debt securities and other investments.

The overview of the fair value hierarchy and applied valuation methods can be specified as follows:

Listed equity securities – Fair value through OCI			2021 USD'M	2020 USD'M
	– Level 1	Assets	2.7	3.9
		Liabilities	–	–
Valuation techniques and key inputs:	Quoted prices in an active market.			
Significant unobservable inputs:	None.			

Listed equity securities – Fair value through profit and loss			2021 USD'M	2020 USD'M
	– Level 1	Assets	68.7	25.3
		Liabilities	–	–
Valuation techniques and key inputs:	Quoted prices in an active market.			
Significant unobservable inputs:	None.			

Listed debt securities – Fair value through profit and loss			2021 USD'M	2020 USD'M
	– Level 1	Assets	30.5	–
		Liabilities	–	–
Valuation techniques and key inputs:	Quoted prices in an active market.			
Significant unobservable inputs:	None.			

Futures			2021 USD'M	2020 USD'M
	– Level 1	Assets	95.1	–
		Liabilities	10.7	61.3
Valuation techniques and key inputs:	Quoted prices in an active market.			
Significant unobservable inputs:	None.			

Physical forwards			2021 USD'M	2020 USD'M
	– Level 1	Assets	274.6	–
		Liabilities	1,330.5	–
Valuation techniques and key inputs:	Quoted prices in an active market.			
Significant unobservable inputs:	None.			

OTC derivatives			2021 USD'M	2020 USD'M
	– Level 2	Assets	543.6	202.3
		Liabilities	1,410.8	144.4
Valuation techniques and key inputs:	Reference prices. Inputs include observable quoted prices sourced from traded reference prices or recent traded price indices in an active market for identical assets or liabilities			
Significant unobservable inputs:	None.			

Physical forwards			2021 USD'M	2020 USD'M
	– Level 2	Assets	656.5	6.5
		Liabilities	1,277.0	4.6
Valuation techniques and key inputs:	Reference prices. Inputs include observable quoted prices sourced from traded reference prices or recent traded price indices in an active market for identical assets or liabilities.			
Significant unobservable inputs:	None.			

Cross-currency swaps			2021 USD'M	2020 USD'M
	– Level 2	Assets	10.2	7.3
		Liabilities	51.3	8.6
Valuation techniques and key inputs:	Discounted cash flow model. Inputs include observable quoted prices sourced from exchanges or recent traded price indices in an active market for identical assets or liabilities. Prices are adjusted by a discount rate that captures the time value of money and counterparty credit considerations.			
Significant unobservable inputs:	None.			

Interest rate swaps			2021 USD'M	2020 USD'M
	– Level 2	Assets	25.9	21.2
		Liabilities	20.6	36.3
Valuation techniques and key inputs:	Discounted cash flow model. Inputs include observable quoted prices sourced from exchanges or recent traded price indices in an active market for identical assets or liabilities. Prices are adjusted by a discount rate that captures the time value of money and counterparty credit considerations.			
Significant unobservable inputs:	None.			

Non-financial hedged items			2021 USD'M	2020 USD'M
	– Level 2	Assets	679.0	140.7
		Liabilities	307.7	474.7
Valuation techniques and key inputs:	Reference prices. Inputs include observable quoted prices sourced from traded reference prices or recent traded price indices in an active market for identical assets or liabilities.			
Significant unobservable inputs:	None.			

Other financial derivatives			2021 USD'M	2020 USD'M
	- Level 2	Assets	420.7	446.0
		Liabilities	218.0	166.8
Valuation techniques and key inputs:	Discounted cash flow model. Inputs include observable quoted prices sourced from exchanges or traded reference indices in an active market for identical assets or liabilities. Prices are adjusted by a discount rate that captures the time value of money and counterparty credit considerations.			
Significant unobservable inputs:	None.			

Inventories			2021 USD'M	2020 USD'M
	– Level 2	Assets	29,653.5	20,177.6
		Liabilities	–	–
Valuation techniques and key inputs:	Reference prices. Quoted prices in an active market, adjusted with a premium/discount for quality and/or location			
Significant unobservable inputs:	None.			

Fixed-rate borrowings			2021 USD'M	2020 USD'M
	– Level 2	Assets	–	–
		Liabilities	5,019.8	2,523.6
Valuation techniques and key inputs:	Discounted cash flow model. Cash flows discounted at current borrowing rates for similar instruments.			
Significant unobservable inputs:	None.			

Listed debt securities – Fair value through profit or loss			2021 USD'M	2020 USD'M
	– Level 3	Assets	246.8	220.9
		Liabilities	–	–
Valuation techniques and key inputs:	Discounted cash flow model. The resultant asset is a discounted cash flow of the underlying throughput.			
Significant unobservable inputs:	– Forecast throughput – Discount rates using weighted average cost of capital – Market illiquidity – Operating cost and capital expenditures			

Unlisted equity investments – Fair value through profit or loss			2021 USD'M	2020 USD'M
	– Level 3	Assets	133.5	34.3
		Liabilities	–	–
Valuation techniques and key inputs:	Valuations obtained from the asset managers of the funds.			
Significant unobservable inputs:	– Market illiquidity			

Unlisted equity investments – Fair value through OCI			2021 USD'M	2020 USD'M
	– Level 3	Assets	242.4	232.7
		Liabilities	–	–
Valuation techniques and key inputs:	Valuations obtained from the asset managers of the funds.			
Significant unobservable inputs:	– Market illiquidity.			

Other investments – fair value through profit or loss			2021 USD'M	2020 USD'M
	– Level 3	Assets	862.2	–
		Liabilities	–	–
Valuation techniques and key inputs:	Discounted cash flow model, based on expected cash flows from all contractually linked agreements to the structured entity.			
Significant unobservable inputs:	– Expected cash flows relate to anticipated quantity and timing of oil deliveries, based on specific contractual arrangements with the structured entity – Discount rates using: weighted average use of capital, risk adjusted to factor in market volatility in the oil price as well as risks specific to the counterparty and contracts			

OTC derivatives			2021 USD'M	2020 USD'M
	– Level 3	Assets	–	1.0
		Liabilities	124.9	99.3
Valuation techniques and key inputs:	Discounted valuation of cashflows generated based on unobservable inputs.			
Significant unobservable inputs:	Total load consumption forecast, scaling factor.			

Physical forwards			2021 USD'M	2020 USD'M
	– Level 3	Assets	915.4	414.7
		Liabilities	683.6	309.6
Valuation techniques and key inputs:	Valuation model based on market assumptions and reference prices. Key input is the definition of the observable risk position that forms the basis for the valuation of these physical forwards.			
Significant unobservable inputs:	The definition of the observable risk position.			

Non-financial hedged items			2021 USD'M	2020 USD'M
	– Level 3	Assets	2,081.3	0.7
		Liabilities	–	310.4
Valuation techniques and key inputs:	Valuation model based on market assumptions and reference prices. Key input is the market liquefaction fee curve that is defined using (1) observable quoted prices sourced from traded reference prices or recent traded price indices in an active market for identical assets or liabilities (2) observable risk positions (3) assumptions on ratios attributed to the different observable risk positions.			
Significant unobservable inputs:	The identification of observable risk positions and ratios attributed to them			

G. Notes to consolidated financial statements

43. Related parties

In the normal course of business, the Group enters into various transactions with related parties, including fixed price commitments to sell and to purchase commodities, forward sale and purchase contracts, agency agreements and management service agreements. Outstanding balances at period end are unsecured and settlement occurs in cash. There have been no guarantees provided or received for any related-party receivables or payables.

All transactions between the Company and its subsidiaries are eliminated on consolidation along with any unrealised profits and losses between its subsidiaries, associates and joint ventures.

43.1 Transactions with key management personnel

43.1.1 Key management personnel compensation

In addition to their salaries, the Group also provides non-cash benefits to directors and executive officers. Executive officers also participate in the Group's share participation programme (reference is made to Note 11). Compensation of key management personnel, including all members of the Board of Directors and the Management Committee, comprised the following:

	2021 USD'M	2020 USD'M
Short-term employee benefits	5.5	11.4
Post-employment benefits	0.5	0.5
Share-based payments	15.6	23.5
Total	**21.6**	35.4

43.1.2 Key management personnel and director transactions

As at 30 September 2021, loans receivable from the members of the Board of Directors and the Management Committee total USD14.3 million (FY2020: USD20.8 million). Interest is charged on the loans at approximately LIBOR + 1.5 percent and the loans are repayable within the one to three-year bracket.

43.2 Other related party transactions

Related-party receivables/(payables)	2021 USD'M	2020 USD'M
Puma Energy Holdings Pte. Ltd. *	–	1,451.8
Trafigura Control Holdings Pte. Ltd.	2.2	0.9
Porto Sudeste do Brasil S.A.	19.0	(94.5)
JINCHUAN Group Co. Ltd.	303.1	223.4
Farringford N.V.	16.9	47.6
Empresa Minera del Caribe S.A. (Emincar)	249.5	253.9
Trafigura Beheer B.V.	12.8	11.7
Nayara Energy Limited	1.9	184.5
Impala Terminals Group S.à r.l.	8.4	(3.1)
Beheer Malta Ltd.	(12.1)	(10.5)
Minas de Aguas Teñidas, S.A.U (MATSA) **	–	(74.3)
Others	(52.3)	(43.8)
Total	**549.4**	1,947.6

	2021 USD'M	2020 USD'M
Sales	8,429.9	7,333.7
Purchases	4,610.5	3,035.2
Interest income	58.9	77.8
Cost recharges	26.7	12.1

* Consolidated effective 30 September 2021; refer to Note 7.

** Investment disposed effective 30 September 2021.

Transactions between related parties are made on commercial terms.

The table below summarises the nature of relationship and the nature of transactions entered into with the related party:

Party	Nature of relationship	Nature of transaction
Beheer Malta Ltd.	Parent company	Employee participation plan
Empresa Minera del Caribe S.A. (Emincar)	Equity-accounted investee	Financing and trading agreement
Farringford N.V.	Parent company	Loans and cost recharges
Impala Terminals Group S.à r.l.	Equity-accounted investee	Multimodal logistic services
JINCHUAN Group Co. Ltd.	Equity-accounted investee	Trading agreement
Minas de Aguas Teñidas, S.A.U (MATSA)*	Equity-accounted investee	Financing and trading agreement
Nayara Energy Limited	Equity-accounted investee	Financing and trading agreement
Porto Sudeste do Brasil S.A.	Equity-accounted investee	Loans and cost recharges
Puma Energy Holdings Pte. Ltd.**	Equity-accounted investee	Financing and trading agreement
Trafigura Beheer B.V.	Parent company	Loans and cost recharges
Trafigura Control Holding SARL	Parent company	Employee participation plan
Trafigura Control Holdings Pte. Ltd.	Parent company	Employee participation plan
Trafigura Control Holdings Pte. Ltd.	Parent company	Buy back of prefence shares

*Investment disposed effective 30 September 2021.

**Consolidated effective 30 September 2021; refer to Note 7.

44. Hyperinflationary economies

Accounting policy

When the economy of a country in which the Group operates is deemed hyperinflationary and the functional currency of a Group entity is the currency of that hyperinflationary economy, the financial statements of such Group entities are adjusted so that they are stated in terms of the measuring unit current at the end of the reporting period. This involves restatement of income and expenses to reflect changes in the general price index from the start of the reporting period and restatement of non-monetary items in the statement of financial position to reflect current purchasing power as at the period end using a general price index from the date when they were first recognised. Comparative amounts are not adjusted. Any differences arising were recorded in equity on adoption.

The only hyperinflationary economy applicable to the Group is Argentina. The financial statements of the subsidiaries in this country are first adjusted for the effect of inflation with any gain or loss on the net monetary position recorded in the related functional lines in the Consolidated Statement of Income and then translated into USD.

With the effect from 1 July 2018, the Argentine economy is considered to be hyperinflationary in accordance with the criteria in IAS 29, 'Financial reporting in hyperinflationary economies'. Accordingly, the financial statements include restatements for changes in the general purchasing power of the Argentine Peso. These restatements are made for all Group entities that have the Argentine Peso as functional currency.

On the application of IAS 29, the Group used a conversion coefficient derived from official wholesale price and consumer price indices published by the National Institute of Statistics and Censuses (INDEC, in its Spanish acronym).

The index rates and corresponding conversion coefficients applied are as follows:

Year	**Index, % (December 2010 = 100)**	Conversion coefficient
30 September 2014	182.0	853.5
30 September 2015	205.6	755.4
30 September 2016	288.6	538.1
30 September 2017	347.8	446.4
30 September 2018	488.7	317.8
30 September 2019	751.6	206.6
30 September 2020	1,026.9	151.2
30 September 2021	1,565.7	100.0

Monetary assets and liabilities are not restated because they are already expressed in terms of the monetary unit current as at 30 September 2021. Non-monetary assets and liabilities (items that are not already expressed in terms of the monetary unit as at 30 September 2021) are restated by applying the above index.

The impact of USD13.7 million has been recorded in other comprehensive income (FY2020: USD12.8 million). The pre-tax gain for the year of USD9.2 million is included in finance income (FY2020: loss of USD3.6 million).

G. Notes to consolidated financial statements

45. Consolidated subsidiaries

For entities where legal shareholding is less than 50 percent, the Group has consolidated based on the definition of control under IFRS. Certain entities with a percentage of effective economic interest below 50 percent are held through intermediate holding companies controlled by the Group.

Principal consolidated operating subsidiaries	Location	% Owned 2021	% Owned 2020
Boyaca Navigation Inc.	Panama	100.0%	100.0%
Breakwater Resources Ltd.	Canada	100.0%	100.0%
C.I. Trafigura Coal Colombia S.A.S.	Colombia	100.0%	100.0%
C.I. Trafigura Petroleum Colombia S.A.S	Colombia	100.0%	100.0%
Catalina Huanca Sociedad Minera S.A.C.	Peru	100.0%	100.0%
Cloudbreak Investments S.à r.l.	Luxembourg	100.0%	100.0%
CloudEnter Holdings Limited	Malta	100.0%	–
Cortes Holding S.à r.l.	Luxembourg	100.0%	100.0%
Cortes Investments S.à r.l.	Luxembourg	100.0%	100.0%
DT Trading Ltd.	Bahamas	100.0%	50.0%
DTS Commercial Pte. Ltd.	Singapore	100.0%	50.0%
DTS Refining Pte. Ltd.	Singapore	100.0%	50.0%
DTS Shipping Ventures Pte. Ltd.	Singapore	100.0%	50.0%
Edenfield Procurement DMCC	United Arab Emirates	100.0%	100.0%
Energy Infrastructure Holdings S.à r.l	Luxembourg	93.4%	55.5%
Energy Infrastructure Investments S.A.R.L	Luxembourg	93.4%	55.5%
Galena Asset Management B.V.	Netherlands	100.0%	100.0%
Galena Asset Management SA	Switzerland	100.0%	100.0%
Hull Ocean Going Barges UK Ltd	United Kingdom	93.4%	55.5%
Iberian Minerals Corp.	Switzerland	100.0%	100.0%
Impala Holdings Limited	Malta	100.0%	100.0%
Impala Middle East General Warehousing L.L.C.	United Arab Emirates	100.0%	100.0%
Impala Terminals Burnside LLC	United States	100.0%	100.0%
Impala Terminals Colombia S.A.S	Colombia	100.0%	100.0%
Impala Terminals DRC SARL	The Democratic Republic of Congo	100.0%	100.0%
Impala Terminals Middle East FZE	United Arab Emirates	100.0%	100.0%
Impala Terminals UK Ltd.	United Kingdom	100.0%	100.0%
Impala Warehousing and Logistics (Shanghai) Co., Ltd	China	100.0%	100.0%
IWL (Luxembourg) S.à r.l.	Luxembourg	100.0%	100.0%
IWL Capital LLC	Marshall Islands	100.0%	100.0%
IWL Holding B.V.	Netherlands	100.0%	100.0%
IWL Holdings (Luxembourg) S.à r.l.	Luxembourg	100.0%	100.0%
IWL River Inc.	Panama	100.0%	100.0%
LYKOS India Private Limited	India	100.0%	100.0%
NGL Equipments, S.A. de C.V.	Mexico	100.0%	100.0%
Ningbo Trans-Coal Trading Co., Ltd.	China	100.0%	100.0%
NN2 Newco Limited	United Kingdom	98.5%	98.5%
Nyrstar Belgium NV	Belgium	98.5%	98.5%
Nyrstar Budel BV	The Netherlands	98.5%	98.5%
Nyrstar Canada (Holdings) Ltd	Canada	100.0%	100.0%
Nyrstar Clarksville Inc	United States	98.5%	98.5%
Nyrstar Finance International AG	Switzerland	98.5%	98.5%
Nyrstar France SAS	France	98.5%	98.5%
Nyrstar Hobart Pty Ltd	Australia	98.5%	98.5%
Nyrstar Holdings PLC	Malta	100.0%	100.0%
Nyrstar Myra Falls Ltd	Canada	100.0%	100.0%
Nyrstar Netherlands (Holdings) BV	The Netherlands	98.5%	98.5%
Nyrstar Port Pirie Pty Ltd	Australia	98.5%	98.5%
Nyrstar Sales & Marketing AG	Switzerland	98.5%	98.5%
Nyrstar Tennessee Mines – Gordonsville LLC	United States	98.5%	98.5%
Nyrstar Tennessee Mines – Strawberry Plains LLC	United States	98.5%	98.5%
Petromining S.A.	Argentina	100.0%	100.0%
Puma Energy (Australia) Bitumen Pty Ltd	Australia	93.4%	55.5%
Puma Energy (UK) Limited	United Kingdom	93.4%	55.5%
Puma Energy (ZMT) Holdings Limited	Malta	93.4%	55.5%
Puma Energy B.V.	Netherlands	93.4%	55.5%
Puma Energy Bahamas S.A.	Bahamas	93.4%	55.5%
Puma Energy Caribe LLC	United States	93.4%	55.5%
Puma Energy Holdings (Luxembourg) S.à r.l	Luxembourg	93.4%	55.5%
Puma Energy Holdings Pte Ltd	Singapore	93.4%	55.5%
Puma Energy Investments Holdings Pte. Ltd.	Singapore	93.4%	55.5%
Puma Energy PNG Limited	Papua New Guinea	93.4%	55.5%
Puma Energy PNG Refining Limited	Papua New Guinea	93.4%	55.5%
Puma Energy Supply & Trading Pte. Ltd.	Singapore	93.4%	55.5%
Puma International Financing S.A.	Luxembourg	93.4%	55.5%
Seal Sands Gas Transportation Limited	United Kingdom	100.0%	100.0%
Shipstern Holdings S.à r.l.	Luxembourg	100.0%	100.0%
Sociedad Portuaria Impala Terminals Barrancabermeja S.A. (formerly known as Impala Terminals Barrancabermeja S.A.)	Colombia	100.0%	100.0%
TCPU LLC	United States	100.0%	100.0%
Teesside Gasport Limited	United Kingdom	100.0%	100.0%
TPTE Holding Limited	Malta	100.0%	100.0%
Trafigura Argentina S.A.	Argentina	100.0%	100.0%
Trafigura Asia Trading Pte. Ltd.	Singapore	100.0%	100.0%
Trafigura Canada General Partnership	Canada	100.0%	100.0%
Trafigura Canada Limited (formerly known as Trafigura Marketing Ltd.)	Canada	100.0%	100.0%
Trafigura CGR Limited	Malta	100.0%	–
Trafigura Chile Limitada	Chile	100.0%	100.0%
Trafigura Energy Colombia S.A.S.	Colombia	100.0%	100.0%
Trafigura Eurasia LLC	Russian Federation	100.0%	100.0%
Trafigura Funding S.A.	Luxembourg	100.0%	100.0%
Trafigura Holding Sàrl (formerly known as Trafigura Holding GmbH)	Switzerland	100.0%	100.0%
Trafigura Holdings Limited	Malta	100.0%	100.0%
Trafigura Holdings Pte. Ltd.	Singapore	100.0%	100.0%
Trafigura Holdings S.à r.l.	Luxembourg	100.0%	100.0%
Trafigura India Private Limited	India	100.0%	100.0%
Trafigura Investment (China) Co., Ltd.	China	100.0%	100.0%
Trafigura Limited	United Kingdom	100.0%	100.0%
Trafigura Maritime Logistics Pte. Ltd.	Singapore	100.0%	100.0%
Trafigura Maritime Ventures Limited	Malta	100.0%	100.0%
Trafigura Marketing Inc.	United States	100.0%	100.0%
Trafigura Metales Basicos S.A.C.	Peru	100.0%	100.0%
Trafigura Mexico, S.A. de C.V.	Mexico	100.0%	100.0%
Trafigura Mongolia LLC	Mongolia	100.0%	100.0%
Trafigura Nat Gas Limited	Malta	100.0%	100.0%
Trafigura Overseas Projects Pte. Ltd.	Singapore	100.0%	100.0%
Trafigura PE Holding Limited	Malta	100.0%	100.0%
Trafigura Peru S.A.C.	Peru	100.0%	100.0%
Trafigura Pte Ltd	Singapore	100.0%	100.0%
Trafigura Services Australia Pty Ltd	Australia	100.0%	100.0%
Trafigura Services Pte. Ltd.	Singapore	100.0%	100.0%
Trafigura Services South Africa (Pty) Ltd	South Africa	100.0%	100.0%
Trafigura Smelting Investments Limited	Malta	100.0%	100.0%
Trafigura Storage Investments Ltd	Malta	100.0%	–
Trafigura Terminals (Perth) Pty Ltd	Australia	100.0%	100.0%
Trafigura Trading (Europe) Sàrl	Switzerland	100.0%	100.0%
Trafigura Trading (UK) Limited	United Kingdom	100.0%	100.0%
Trafigura Trading (Yangshan) Co., Ltd.	China	100.0%	100.0%
Trafigura Trading LLC	United States	100.0%	100.0%
Trafigura Ukraine LLC	Ukraine	100.0%	100.0%
Trafigura US Inc.	United States	100.0%	100.0%
Trafigura Ventures IX B.V.	Netherlands	100.0%	100.0%
Trafigura Ventures Trading Ltd	Mauritius	100.0%	100.0%
Trafigura Ventures V B.V.	Netherlands	100.0%	100.0%
Trafigura Ventures VIII B.V.	Netherlands	100.0%	100.0%
Urion Holdings (Malta) Limited	Malta	100.0%	100.0%
Urion Mining International B.V.	Netherlands	100.0%	100.0%

46. Subsequent events

Accounting policy

If the Group receives information after the reporting period, but prior to the date of authorisation for issue, about conditions that existed at the end of the reporting period, the Group will assess if the information affects the amounts that it recognises in the Group's Consolidated Financial Statements. The Group will adjust the amounts recognised in its financial statements to reflect any adjusting events after the reporting period and update the disclosures that relate to those conditions in the light of the new information. For non-adjusting events after the reporting period, the Group will not change the amounts recognised in its Consolidated Financial Statements but, if material, will disclose the nature of the non-adjusting event and an estimate of its financial effect, or a statement that such an estimate cannot be made, if applicable.

There are no significant subsequent events which require disclosure.

47. Board of Directors

The Board of Directors	
Mark Irwin	José Larocca
Pierre Lorinet	Sipko Schat
Andrew Vickerman	Mike Wainwright
Jeremy Weir	

Singapore, 7 December 2021.

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